

2022

YEAR END REPORT



ASSOCIATION

OF OLD CROWS

Submitted by:

Shelley Frost

Executive Director

Association of Old Crows (AOC)

The Association of Old Crows (AOC) is an organization for individuals who have common interests in Electronic Warfare (EW), Electromagnetic Spectrum 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.

Advancing Electromagnetic Warfare TOGETHER

INTRODUCTION



ASSOCIATION
OF OLD CROWS

Another successful year at AOC has ended. COVID-19 impacted how AOC did business in 2020, 2021, and even 2022, but we persevered and pushed forward as an even more relevant and visionary organization. AOC staff came together with exceptional initiatives and innovations that enabled us to work successfully in virtual, in-person, and hybrid environments, events, webinars, and training opportunities. We continue to hold steady with a membership of over 14,000 EW and EMSO professionals. The AOC Board of Directors and staff continue to evolve and execute our operating plan, strategy, and mission to support the association. We are financially solid due to the great work of the staff, the finance committee, and the Board.

Despite some restrictions, our events returned with a bang this last year, with a full calendar of AOC conferences and events slated for 2023, with many restrictions lifted on the military installations. Our annual convention saw record-breaking attendance numbers and featured high-ranking speakers and panelists.

AOC has been able to adapt, and the lessons we have learned have added innovative thought to our Five-Year Strategy for continued growth in advocacy, education, and networking for our membership. We are now one year into implementing the strategy, and significant progress has been made to put that into motion.

The strategy is meant to position ourselves to grow and compete as the premier global professional association advocating across the defense industry, government agencies, militaries, and academia for achieving and sustaining a military advantage in the EMS.

AOC hired a consulting firm, McKinley Associates to achieve some of the main goals set by the strategy. AOC is engaging in a disciplined process to examine the organization's market landscape and possible directions to add value to its members and stakeholders while unlocking meaningful new value for members and revenue generation opportunities. They facilitated member and non-member focus groups in conjunction with the annual convention, held virtual interviews with 15 stakeholders, and will deploy a comprehensive survey in early 2023. Directors will begin working meetings with them in March with a final report and steps to be delivered around Q2 of 2023.

AOC is concluding 2022 in a strong, vibrant, and financially solid position and 2023 will be an exciting and dynamic year.

BOARD ACTIVITIES

2022 AOC Board of Directors

President	Glenn "Powder" Carlson
President-Elect	Brian Hinkley
Secretary	Mark Schallheim
Treasurer	Greg Patschke
International Rep.	Sue Robertson
At Large Directors	Haruko Kawahigashi, Greg Patschke, Mike Ryan, Nino Amoroso, Steve Oatman, and Sharon Lyscak
Regional Directors	Central Director – Jim Utt Mid-Atlantic Director – Dennis Monahan Northwestern Director – Mark Schallheim Pacific Director – Rick Lu International I Director – Sue Robertson International II Director – Jurgen Opfer Southern Director – Karen Brigance Mountain-Western Director – Wayne Shaw Northeast Director – Myles Murphy
Past President	Muddy Watters
Appointed Directors	Judge Bourque, Tuhin Das

Annual Election

The annual election was conducted September 1-30, 2022, for the 2023 Board of Directors. Results of the election were:

Two (2) At-Large Directors: Haruko Kawahigashi and Ken Dworkin

International I Director: Erik Bamford

Pacific Director: Amanda Brockermeier

Northwestern Director: Mark Schallheim

Outgoing Board members: Judge Bourque, Tuhin Das, Rick Lu, Sharon Lyszak, and Sue Robertson

Meetings

The Board of Directors kept busy in 2022, holding five virtual board meetings and two in-person board meetings.

Date	Description
February 17, 2022	Virtual
May 2, 2022	In-Person
July 14, 2022	Virtual
August 23, 2022	Virtual
September 15, 2022	Virtual
October 24, 2022	In-Person
November 17, 2022	Virtual

Strategic Planning

Brian Hinkley led the strategic planning committee. The Board approved a Five-Year Strategy

The Board approved the 2023 Operating Plan (OpMan 14 Appendix A) in October 2022. This operating plan enables Board members, committee leads, Executive Director, and staff to have a common understanding of the overall objectives for the coming year.

A summary of the priorities and look ahead can be found at the end of this document. The specific details can be found in OpMan 14 Appendix A online at [crows.org](https://www.crows.org).
<https://www.crows.org/page/governingdocuments>

AOC Governing Documents

Several OpMans (AOC's Governing Documents) were revised during 2022; the effective dates are shown in the table below. OpMans can be found on the top menu bar (under About) of the AOC home page ([crows.org](https://www.crows.org)) after you have logged in. <https://www.crows.org/page/governingdocuments>

OPMAN	EFFECTIVE DATE
11 – Purposes and Responsibilities	February 2, 2021
13 – Bylaws of the Association of Old Crows	March 11, 2021
14 – AOC Strategic Positioning	October 24, 2022
15 – Code of Ethics	March 11, 2021
16 – Meeting Minutes	April 26, 2019
17 – Board/Chapter Operations	February 8, 2021
18 – Non-Discrimination Policy	February 16, 2021
21 – Financial Management	February 12, 2020
22 – Reserve Fund Policy	February 11, 2022
23 – Travel and Expense Reimbursement	March 11, 2021
24 – Records Retention	February 2, 2021
25 – Anti-Trust Compliance Policy	May 2, 2022
31 – Awards Program	March 11, 2021
32 – Nominations and Election Committee	March 11, 2021
41 – Conference Planning, Operations, and Reporting	April 26, 2019
42 – Certification Program	November 11, 2021
51 – Conducting Classified Events	February 19, 2021
72 – Annual Chapter Recognition Program	October 31, 2019
73 – Publishing Chapter Events in the JED/eCrow	October 31, 2019
74 – Establishing, Maintaining, and Closing AOC Chapters	May 13, 2022
92 – Human Resource Management	March 11, 2021

2023 AOC Board of Directors

President	Brian Hinkley
Vice-President	Myles Murphy
Secretary	Dennis Monahan
Treasurer	Greg Patschke
International Executive	Erik Bamford
At Large Directors	Haruko Kawahigashi, Greg Patschke, Mike Ryan, Nino Amoroso, Steve Oatman, and Ken Dworkin
Regional Directors	Central Director – Jim Utt Mid-Atlantic Director – Dennis Monahan Northeast Director – Myles Murphy Northwestern Director – Mark Schallheim Pacific Director – Amanda Brockermeyer International I Director – Erik Bamford International II Director – Jurgen Opfer Southern Director – Karen Brigance Mountain-Western Director – Wayne Shaw
Past President	Glenn “Powder” Carlson
Appointed Directors	Ken “Kilo” Parks and Frank “Cowboy” Ball

Annual Assembly of Delegates

The meeting of AOC Delegates (chapter representatives) was held in person on October 26, 2022 in conjunction with the Annual Symposium. The meeting provided recap of the year by the president and the swearing in of the 2022 Board of Directors.



FINANCIAL

The Finance Committee held several meetings throughout the year to closely monitor the finances with a top priority of AOC's Five-Year Strategy. We exceeded expectations by ending the year with a projected net operating surplus of \$434,634 helping to offset the loss from 2020.

AOC Reserve Fund Allocation - \$2,200,000

OPMAN 22 mandated contingency (50% of the internal operating budget plus anticipated capital expenses for the next 10 years)

AOC Current Obligations - \$365,416

Chapter Sustainment, 3-Year/Life Membership, Accrued Time Off

AOC Account Balances - \$4,604,817

Schwab (Fixed Income & Equities) - \$4,154,151; Checking - \$450,666

Available "Extra Funding" - \$1,580,198

Account Balances – (Reserve Fund + Operating Obligations) + Net Operating Income

AOC is financially solvent coming out of 2022 and has a stable foundation to start FY 2023.

2021 Financial Audit

The 2021 independent audit report's release showed a gain of \$1,007,723 (income from operation expenses) and that current financial operations reflect sound practices.

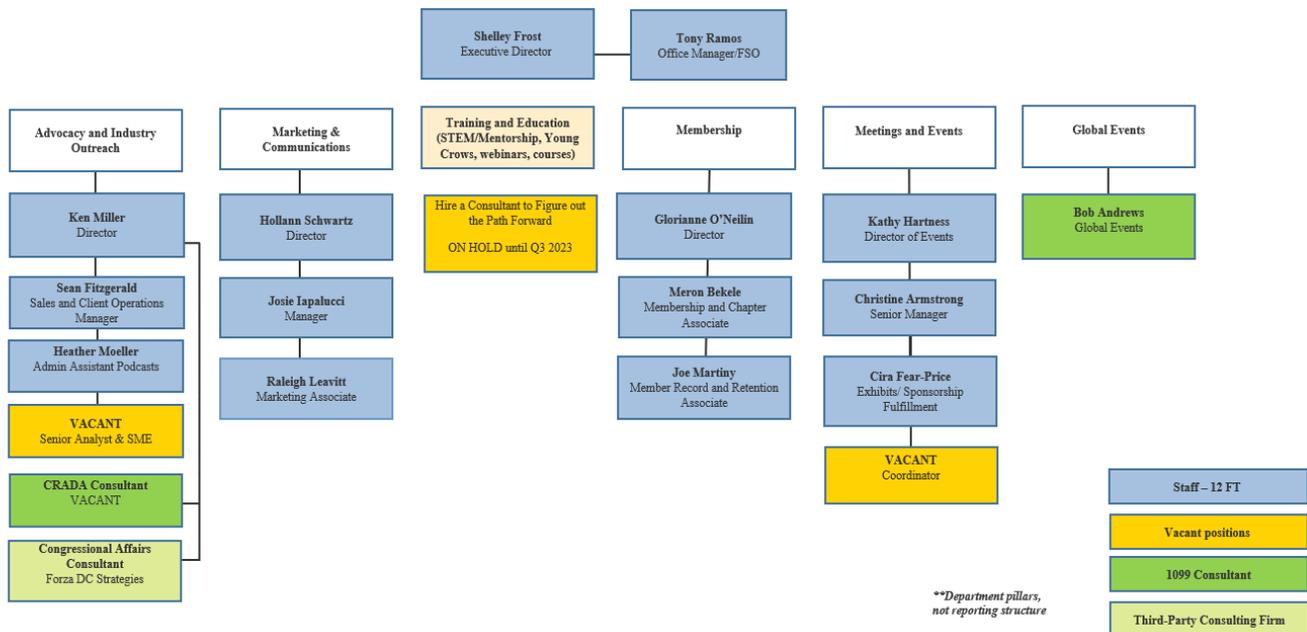
The table below shows audit report income (loss) from operations for years 2016 through 2021. The 2022 audit is scheduled for March 2023.

	2022 projected	2021	2020	2019	2018	2017	2016
Revenue	~\$2,931,749	\$4,129,946	\$2,009,909	\$4,375,436	\$3,389,992	\$3,440,150	\$3,102,935
Expenses	~\$3,133,749	\$3,122,223	\$2,498,654	\$3,700,666	\$3,498,698	\$2,975,067	\$2,831,748
Income (loss) from operations	~\$202,000 *market correction	\$1,007,723	\$488,745 *COVID	\$674,770	\$108,706 *market correction	\$465,083	\$271,187

OPERATIONS

HQ Staff

As of December 2023, the staff is composed of fifteen (15) employees (14 full-time, one consultant). An organization chart is provided below:



2022 Staff Changes

- Josie Iapalucci, hired in February, Marketing and Communications Manager
- Tony Ramos, hired in March, Executive Assistant
- Joe Martiny, hired in August, Member Records and Retention Associate
- Heather Moeller, hired in November, Administrative Assistant
- Kathy Hartness, hired in December, Events Director
- Departing employees: Tala Alshaboot, Blain Bekele, and Amy Belicev

Contractor Services

Outside contractor services will continue in 2023 with information technology services by TSI and bookkeeping & accounting by Consultance Accounting Services.

Naylor Agreement

AOC has contracts with Naylor Association Solutions to produce the weekly electronic newsletter eCrow and the monthly publication, *Journal of Electromagnetic Dominance (JED)*, on our behalf. The contract for eCrow expires in 2023 and the contract for the JED expires 2024.

MEMBERSHIP

Overall individual memberships show a slight increase in both individual membership and industry membership compared to 2021 (see chart below). AOC continues to offer special membership dues incentives such as student memberships, active-duty military, and one-year memberships tied to certain AOC events/activities.

The Membership Committee consisted of chairman Tuhin Das and Regional Directors Keith Everly, Jim Pryor, Mark Schallheim, Rick Lu, Sue Robertson, Jurgen Opfer, Karen Brigance, Sam Roberts, and Myles Murphy.

Membership	Dec 2022	Dec 2021	Dec 2020	Dec 2019	Dec 2018	Dec 2017	Dec 2016
US	11,439	11,391	11,306	10,849	10,419	10,078	10,340
International	3,022	2,938	2,948	2,901	2,643	2,722	2,493
Total	14,461	14,329	14,254	13,750	13,062	12,800	12,833
Industry	222	216	226	217	230	221	211

AOC Membership continues to provide potential crows with insight into “Why be a Crow?” and implement changes to increase both industry and individual member benefits.

Chapter Sustainment Initiative Program – Assistance Fund

A chapter assistance fund was initiated in 2015 with funds from a defunct Chapter. Monies may be disbursed to chapters with funding and/or financial needs based on stipulations contained in OpMan 74, Section II, Paragraph H. The current balance is \$44,942. A history of activity is provided below:

Month/Year	Balance	Note
June 2015	\$79,791	Initial Funding
2015	\$78,291	\$1,500 total disbursements
2016	\$76,291	\$2,000 total disbursements
2017	\$86,729	\$4,250 total disbursements and \$14,688 funding from the closing of two chapters
2018	\$76,634	\$10,095 total disbursements
2019	\$53,378	\$23,599 total disbursements and \$341 funding from the closing of one chapter
2020	\$50,728	\$3,218 total disbursements and \$568 funding from the closing of one chapter
2021	\$49,452	\$1,000 total disbursements and \$276 Audit adjustment
2022	\$44,942	\$4,510 total disbursements

Chapters

Northwest Region (5 chapters) – Frozen Crows Chapter, Joint Base Lewis McChord Chapter, Mile High Country Crows Chapter, Pikes Peak Roost Chapter, Whidbey Roost Chapter

Pacific (6 chapters) – Cabrillo Crows Chapter, Diamond Head Chapter, Golden Gate Chapter, Greater LA Chapter, Mugu Crows Chapter, Santa Barbara Chapter

Mountain West (9 chapters) – Cochise Roost Chapter, Billy Mitchell Chapter, Dallas Chapter, Desert Sun Roost Chapter, Fort Worth Chapter, Querque Chapter, Southwestern Chapter, Golden Spike Chapter, Capital of Texas Crows Chapter

Central Region (6 chapters) – Crane Roost Chapter, Gateway Chapter, KittyHawk Chapter, Windy City Chapter, Air Capital Roost Chapter, Ravens Roost Chapter

Northeast (7 chapters) – Empire Chapter, Garden State Chapter, Granite State Chapter, Maple Leaf Chapter, Metropolitan Chapter, Niagara Frontier Chapter, Patriots' Roost Chapter

Mid-Atlantic (8 chapters) – APG Susquehanna Chapter, Capital Club Chapter, Chesapeake Bay Roost Chapter, Dahlgren Chapter, Independence Chapter, Pax River Chapter, Charlie Yankee Roost Chapter

Southern (9 chapters) – Dixie Crow Chapter, Emerald Coast Chapter, Green Jacket Roost Chapter, Gulf Crow's Nest Chapter, Palmetto Roost Chapter, Peachtree Roost Chapter, Barksdale Command Chapter, Redstone Rebel Chapter, Citrus Roost Chapter

International I (12 chapters) – Aardvark's Roost Chapter (South Africa), Arctic Roost Chapter (Norway), De Ooievaar Chapter (Netherlands), India Chapter (India), Israeli Chapter (Israel), Roma Chapter (Italy), La Fayette Chapter (France), Red Baron Roost Chapter (Germany), Saudi Arabia Chapter (Saudi Arabia), Swiss Crows Chapter (Switzerland), UK Chapter, (United Kingdom), Viking Roost Chapter (Sweden)

International II (8 chapters) – AOC Japan Chapter (Japan), Australian Chapter (Australia), Kiwi Chapter (New Zealand), ROK Roost Chapter (South Korea), Singapore Chapter (Singapore), Taipei Chapter (Taiwan, R.O.C.), Wild Parrots Roost Chapter (Brazil) and Condor Chapter (Chile)

The membership committee is working on the revitalization of Air Capitol Roost, Independence Roost, Cabrillo Crows Roost, and Gateway Roost and university clubs are still in the works.

Changes in 2022

New: Czech Republic Roost Chapter
Revitalized: Coastal Virginia Chapter
(formerly Tidewater Chapter)

2022 Chapter of the Year Winners

Large Category

Chapter of the Year: Dixie Crow Chapter

Distinguished Chapter Award: UK Chapter and Kittyhawk Chapter

Excellent Chapter Award: Windy City Chapter

Medium Category

Chapter of the Year: APG Susquehanna Chapter and Garden State Chapter

Distinguished Chapter Award: Patriots Roost Chapter and Palmetto Roost Chapter

Outstanding Chapter Award: Granite State Chapter

Excellent Chapter Award: Billy Mitchell Chapter

Small Category

Chapter of the Year: Diamond Head Chapter

Outstanding Chapter Award: PAX River Chapter

Excellent Chapter Award: Pikes Peak Roost Chapter

Regional Chapter Greatest Increase Award

Central Region: Windy City Chapter

Mid-Atlantic Region: Pax River Roost Chapter

Mountain-Western Region: Billy Mitchell Chapter

Northeast Region: Granite State Roost Chapter

Northwest Region: none

Pacific Region: Diamondhead Chapter

Southern Region: Redstone Rebel Roost Chapter

International Region I: UK Chapter

International Region II: Taipei Chapter

EVENTS

Conferences

With several military installations still not operating at full capacity since the pandemic, AOC held three in-person conferences in 2022. It is anticipated that AOC will host five conferences in 2023.

Conference	2022	2021	2020 (Cancelled COVID-19)	2019	2018	2017
Modern Threats: SAMs Huntsville, AL	Feb. 1-2 112 attendees	-	-	Feb. 5 321 attendees	-	-
Collaborative EW Symposium Point Mugu, CA	-	-	-	Mar. 2-4 620 attendees	Mar. 13-15 564 attendees	April 25-27 589 attendees
Security Cooperation: EW & FMS GTRI Atlanta, GA	-	-	-	Apr. 29-May 1 234 attendees	n/a	May 15-19 265 attendees
Capability Gaps and Enabling Technologies Crane, IN	May 10-11 168 attendees	-	-	May 14-16 313 attendees	May 8-10 264 attendees	May 9-11 242 attendees
EW/Cyber Convergence Charleston, SC	-	-	-	June 4-6 157 attendees	June 5-7 169 attendees	June 6-8 186 attendees
EMS Engineering and Acquisition Dahlgren, VA	-	-	-	Sept. 10-11 138 attendees	-	Sept. 26-28 132 attendees
CEMA, APG, MD	May 3-4 340 attendees	May 25-26 Virtual = 263 In-Person = 223	-	Oct. 8-10 804 attendees	Oct. 23-25 761 attendees	Oct. 17-19 776 attendees

Global Conferences

Global Conferences were overseen by Sue Robertson supported by our conference partner Clarion.

Conference	2022	2021	2020	2019	2018	2017
AOC Europe (Clarion)	May 10-12 Montpellier, France AOC Share \$309,334	Oct. 11-13 Liverpool, UK AOC Share \$256,670	Canceled (COVID-19)	May 13-15, Stockholm, Sweden AOC Share \$315,118	June 5-7, Lausanne, Switzerland AOC Share \$305,465	June 6-8, London, UK AOC Share \$254,747
AOC Asia (Clarion)		Canceled (COVID-19)	Feb. 4-5, Singapore AOC Share \$25,063	Jan. 29-30, Singapore AOC Share \$18,929	Jan. 16-18, Singapore AOC Share \$28,684	Jan. 17-19, Singapore AOC Share \$13,935

2023 Global Conference Schedule

- AOC Asia – tentative in 2023; possible in 2024
- AOC Europe (Clarion) – May 15-17, 2023 – Bonn, Germany
- EW GCC (Abu Dhabi) – tentative 2023

Annual Symposium

AOC 2022 | October 25-27, 2022 | Washington, D.C. Convention Center

Theme: The EMSO Playbook: Maneuvering to Win in a New Era

2022 was the largest event in recent AOC history. With record number of attendees and exhibitors, 2022 proved to be the year that in-person meetings were what members needed and wanted. The overall takeaway from the event was “the right people were there, and the right conversations were brought to the table”. The Convention Committee was chaired by Bill Conley and was comprised of Bryan Clark, Ryan “Rhino” Conner, COL Kevin Finch, Jeff “Squeal” Kawada, and Matt Miller.

	2022 D.C. Conv. Center	2021 D.C. Conv. Center	2020 Canceled	2019 D.C. Conv. Center	2018 D.C. Conv. Center	2017 D.C. Conv. Center
Square Footage Sold	22,000	17,100	-	17,800	16,300	16,900
Exhibiting Companies	143	109	-	120	103	107
Paid Registrants	272	246	-	261	301	294
Full Attendance	2,160	1,703	-	1,978	1,870	1,633

AOC 2022 estimated revenue and expenses are shown in the table below.

	2022 Estimates	2021 Actual	2020 (Cancelled COVID-19)	2019 Actual	2018 Actual	2017 Actual
Paid Registrations	~\$260,810	\$210,340	-	\$230,885	\$259,958	\$263,300
Exhibitors (includes room rentals)	~\$1,267,798	\$1,028,920	-	\$1,051,117	\$981,643	\$972,272
Sponsors	~\$244,700	\$342,000	-	\$325,450	\$281,381	\$177,300
Show Daily	n/a	n/a	-	\$3,000	\$9,750	\$17,325
Total Revenue	~\$1,773,308	\$1,581,260	-	\$1,610,712	\$1,532,732	\$1,430,197
Expenses	~\$799,743	\$693,258	-	\$709,271	\$811,428	\$699,021
Net Revenue/Surplus	~\$973,565	\$888,002	-	\$903,153	\$721,304	\$731,176

International attendance: approximately 15% (15-20% historically).

Other notable activities hosted at AOC 2022 were:

AOC’s Global Security Forum was a closed panel discussion with Lt Gen Chris Badia, Deputy Supreme Allied Commander Transformation, German Air Force, NATO, Norfolk VA followed by a panel session on Multi-Domain Integration and Operations including Marty Hunter, Senior Scientist, L3Harris, Maj Erik Bamford, Norwegian Army, Vice Chair NATO ACG3, and Ken Dworkin SES, Executive Advisor for Electronic Combat, Booz Allen Hamilton. The session was moderated by Dr. Bob Andrews, AOC Director of Global Events. This session was open to diplomatic staff and AOC leadership.

AOC 2023 | December 11-13, 2023 | National Harbor, MD | Gaylord National Resort & Convention Center

Host sponsor: L3Harris

PROFESSIONAL DEVELOPMENT

The 2022 Professional Development program saw a significant decline in participation in online and in-person courses and the much anticipated "Certified Specialist in Electromagnetic Warfare" (CSEW) certification program that was launched in 2021. The Board of Directors decided to put the entire education department on hold as we perform an assessment of the program to figure out why such a drastic decline in participation. A third-party unbiased association research consulting firm, McKinley Advisors, was hired to perform this assessment. The results of this extensive evaluation will be provided in June 2023.

The primary source of professional development that AOC strives to offer its members is instructor-led professional development courses, hosted, and administered by AOC. These exist in the form of:

- In-person (AOC facility)
- In-person (customer's facility)
- Virtual (Live)
- Virtual (Recorded)

AOC's education program was overseen this year by the Education and Training Committee, chaired by Wayne Shaw; the Certification subcommittee was chaired by Chuck Quintero.

Course History

In-Person	2022	2021	2020	2019	2018	2017	2016	2015
# of Courses	2	6	6	11	3	5	7	8
# of Students	28	125	267	183	85	51	111	152

On-Demand	2022	2021	2020	2019	2018
# of Students	69	123	161	14	4

Webinars	2022	2021	2020	2019	2018	2017	2016	2015
# of Courses	21	25	21	19	12	16	17	18
Attendees	5,244	4,575	7,627	3,336	3,173	2,389	2,183	2,811
Sponsorship	\$136,000	\$271,175	\$231,500	\$147,374	\$118,982	\$90,625	\$84,750	\$135,375

Live Courses in 2022

Course Name	Location	Instructor	# of Students Live	# of Students On-Demand
EW Against a New Generation of Threats	Virtual (Adobe Connect)	Dave Adamy	4	1
Cognitive Electronic Warfare: An Artificial Intelligence Approach	Virtual (Adobe Connect)	Dr. Karen Haigh	21	2

AOC Webinars

Webinars continue to attract sponsors and attendees in 2022.

Date	Title	Speaker(s)	Registered	Attended
1/13/2022	GPS Spoofing – History and Prevention	Dana Goward	875	611
1/27/2022	Microwave Photonics Improving DRFM Capabilities Against a New Generation of Radars	Renan Richter	449	296
2/24/2022	Tactical ESM	Dr. Clayton Stewart	651	411
3/10/2022	How To Use Simulation To Align Your Work Team	John Kolm	215	140
4/7/2022	Electronic Warfare and the Moscow Criteria	Thomas Withington	449	282
4/21/2022	Space EW	Tim Fountain	640	374
5/5/2022	Solutions for Quantum Computing and Communications	Gabe Lenetsky	310	194
5/19/2022	The Impact of Rotary Blade Systems on microwave and millimeter wave 5G links	Taro Eichler	217	131
6/2/2022	Millimeter Wave (MMW) Propagation	Dave Adamy	440	276
6/16/2022	Development of Cognitive EW Datasets	Mike Rudolph	485	291
6/30/2022	EM Battle Management	Dustan Hellwig	566	328
7/14/2022	Low SWAP	Matt Orr	466	295
7/28/2022	Cognitive Electronic Warfare: An Artificial Intelligence Approach	Karen Haigh	651	393
8/4/2022	How to conduct 30+ capability demonstrations on CMOSS Mounted Form Factor (CMFF) prototype in 12 months without breaking the bank!	Niraj Srivastava	181	111
9/1/2022	8 Simple Rules for Executing Joint EW	Wayne Shaw	195	74
9/8/2022	Reinforcement Learning and Cognitive EW	Kyle Davidson	365	221
9/22/2022	Across the Spectrum Pond: How the US Military can Procure Tested Solutions from Europe.	Zac George	143	77
11/3/2022	Testing Your RWR - Accuracy Matters	Giovanni D'Amore	182	108
11/10/2022	Electromagnetic Maneuver: Towards a Theoretical Underpinning	Thomas Withington	263	130
11/17/2022	Two-way Time-transfer Digital Design for Distributed Array Operations	Jonathan Chisum	198	134
12/15/2022	In the Flat Field: Did Russian Army Electronic Warfare underperform in Ukraine?	Thomas Withington	613	367

Career Center

The sales for the Career Center are outsourced and still serves to further position the AOC as the best place to come for EMSO, CEMA, & IO talent.

	2022	2021	2020	2019	2018 (March-EOY)
Job Views	85,623	65,836	111,166	925,159	23,344
Job Postings	67	91	81	156	89
Gross Sales (includes pre-orders of posting packages)	\$56,209.30	\$60,924.40	\$65,205.50	\$87,193.75	\$65,658.15
Net Revenue to AOC	\$12,247.93	\$25,528.28	\$16,095.48	\$26,347.58	\$17,499.11

ADVOCACY AND OUTREACH

The mission of the Advocacy and Outreach (A/O) program is to direct, facilitate and integrate stakeholder outreach across the Department of Defense, military, the global defense industrial base, and all of government, including Congress. The program is also charged with building relationships internationally with stakeholders from international AOC chapters. Additionally, the A/O program is charged with integrating its value objectives across all other AOC programs and initiatives.

Advocacy and Outreach was overseen by the Government and Industry Relations Committee, which includes Chairman, Rick Lu, and members, Sue Robertson, and Jim Gigrich.

Value Objectives for Advocacy and Outreach

Value Objectives for Industry

- Provide data, analysis, and context of defense budget
- Influence policy development in Congress and DoD
- Educate and network Members of Congress and staff
- Provide business intelligence/market analysis for better business

Value Objectives for Congress

- Educate Members of Congress and staff
- Provide legislative/budget analysis and policy development
- Improve influence via congressional processes (committee and legislative)
- Strengthen grassroots so Congress knows what's happening on the ground

Value Objectives for DoD/Military

- Provide analysis and context on defense budget
- Collaborate with industry and academia
- Advocate for stronger leadership to provide authority and resources throughout DoD and the Services

2022 Accomplishments/Activities

Advocacy and Outreach built on its reoriented program coming out of COVID from 2020-2021 and began aligning efforts to AOC's five-year strategy. For the program to be successful and to spur success across other departments, AOC must pursue an enterprise approach to advocacy that generates, packages, and distributes knowledge, relationships, and stakeholder value to growing and diverse audiences in the US and abroad. This effort will take several years to implement and fine-tune, but success will help accomplish AOC's strategic goals, including increasing and diversifying streams of revenue.

The main accomplishments were the continued success of AOC's two podcasts – *From the Crows' Nest* and the *History of Crows*. While listenership increased significantly, revenue dropped far below expectations. We had to change the advertising model away from the appearance of industry-sponsored episodes. This transition also led us to seek help from Naylor to help sell advertising. With the right pieces in place, we are optimistic about the revenue potential heading into 2023. Revenue generation aside, AOC podcasts proved to be an adaptable product that helps AOC connect with its diverse members around the world.

From the Crows' Nest (FTCN) Podcast

FTCN is a regularly scheduled podcast featuring interviews, analysis, and discussions covering leading issues of the day related to EW and EMSO. We produced 26 episodes of FTCN in 2022, including episodes focusing on Ukraine, the EMSO Playbook, nuclear policy, and cyber operations. The podcast received more than 70,000 downloads since its inception and regularly received over 5,000 downloads per month. The FTCN audience reflects AOC's global membership – 72 percent US and 28 percent international – and receives downloads from 105 different countries.

The top 5 episodes of 2022 include:

Episode	Air Date	Downloads	Consumption Rate
Delivering the Future of Directed Energy	January 19	3,245	
Learning Lessons from Ukraine	April 13	2,229	
Cognitive Electronic Warfare	March 16	2,225	
Next Generation Jammer	February 2	1,721	
Sustaining EMS Superiority	May 11	1,627	

History of Crows (HOC) Podcast

HOC takes you on a journey throughout time and around the world to meet the inventors, the battles, and the technology that has not only shaped military operations - how we fight - but also how we live. HOC covers some of the most important discoveries, battles, and events that shaped what we know today as EMSO. In 2022, AOC released two episodes in the first quarter, which received a strong response from listeners with nearly 5,000 downloads. Unfortunately, HOC encountered unforeseen production challenges and had to delay new episodes to ensure the professional integrity of the product. Entering 2023, we are planning to produce 7 new episodes covering ALQ-99, Wild Weasels, EF-111, and more.

Episode	Air Date	Downloads	Consumption Rate
Radar Hunters in the Pacific	Jan 26	1,035	
Women in EW	Mar 30	1,036	

AOC History Initiative

The AOC Podcast created an opportunity to initiate a related new program – the AOC History Initiative – to begin to capture, preserve and share the unique history of EW and EMSO to audiences around the world. The History Initiative will combine the HOC podcast, exhibits, museum partnerships, and other deliverables to better tell our story to future generations. Early steps in 2022 included establishing a new History Committee that will be responsible for identifying, collecting, and preserving AOC’s history and advising on the production of HOC podcast episodes and building partnerships with select museums

Congressional Outreach

In May 2022, AOC hired Forza DC, a small government affairs consulting firm to help rebuild AOC’s congressional education program coming out of COVID. Throughout the remainder of the year, Forza DC assisted in conducting several rounds of congressional meetings with both the House and Senate, including the EW Working Group, now in its 23rd year. Additionally, AOC sent a letter to authorizers and appropriators highlighting the need to fund EW priorities listed in the Service Unfunded Priorities Lists. Funding for several programs identified in the letter did receive additional funds in the FY 2023 National Defense Authorization Act (NDAA) and the FY 2023 Omnibus Appropriations Act, which included defense funding.

Furthermore, Forza DC helped AOC work with the EW Working Group to craft legislative language for inclusion in the FY 2023 NDAA to advance oversight of and governance reforms related to the EMS Superiority Strategy Implementation Plan. The amendment was adopted by the House and included as report language in the final NDAA.

Another significant accomplishment for AOC Congressional Outreach was the restart of the Congressional Education Program. On October 14 then-AOC Vice President Brian Hinkley and Col (Ret). Jeffery Fischer briefed EW 101 to 22 congressional staff. In cooperation with the EW Working Group, plans are under development for 4-5 additional “101-style” briefings in 2023.

Finally, at AOC’s 58th Annual Symposium and Convention, Forza DC organized and chaired a Spotlight Session on Congressional Advocacy for EMSO. The panel included current and former senior congressional staff from the House Armed Services Committee.

Other Activity Highlights

In addition to the above deliverables, the Advocacy and Outreach department continued select initiatives from prior years, including:

- Increased stakeholder outreach (industry and military) through engagements in San Antonio, TX, and at numerous trade shows and conferences.
- Chaired a session on EMSO Strategy at the annual Directed Energy S&T Symposium.
- Approved a new CRADA with NSWC Crane to conduct a multi-year study on EW and Radar Technologies. Work on this study will commence in earnest in 2023.
- Monitored Mark-Ups and Hearings in the House/Senate Armed Services Committees and provided analysis of FY 2021 National Defense Authorization Act and FY 2021 Defense Appropriations legislation.
- Conducted regular outreach to AOC Industry Members, including technical subject matter expertise, business development and sales.

2022 AWARDS

PRESTIGE AWARDS	
AOC Gold Medal Recipient	Mr. Jon T. Graves
Hal Gershanoff Silver Medal Award Recipient	Mr. Craig Harm
Col Anton D. Brees Lifetime Service Award Recipients	Mr. Walter Keith Everly
Joseph W. Kearney Pioneer Award Recipient	Mr. H. Wayne Whitten
AOC Technology Hall of Fame Recipients	Mr. Mark Elson and Mr. Ed Mienko
John Clifford Award for the Advancement of the Electromagnetic Domain Award	The Honorable Jim Langevin
COMMUNITY AWARDS	
Project Team of the Year Award	39 EWS
EW Professional Outstanding Young Crow Award	Ms. Madeline Vaughn
Professional Outstanding Achievement Award	Gena Thorn
Military Service Award – Air Force	Major Caitlyn DeFabo, USAF
Military Service Award – Navy	Warrant Officer Eric Nelle, USN
CHAPTER FLOW-UP AWARDS	
Outstanding Chapter Support	Tristan Caruso
Military Individual Excellence Award – Air Force	Captain Paul Moran, USAF
Military Individual Excellence Award – Army	Major David Mack, USA
Military Individual Excellence Award – Navy	Lt Ayesha Shabazz Woods, USN
Military Unit Excellence Award	USS Dewey
Outstanding Unit – NATO	German Air Force Tactical Fighter Wing 51 “Immelmann”
Outstanding Unit – Navy – Shore	Navy Information Operational Command (NIOC) Whidbey Island
Outstanding Unit – Navy – Air	VAQ-130 Zappers
Outstanding Unit – Navy – Surface	USS Brainbridge (DDG 96)



LOOK AHEAD

The five-year strategy and 2023 Operating Plan were approved by the Board of Directors in December. For the detailed report visit <https://www.crows.org/page/governingdocuments> Appendix A and B.

FIVE YEAR GOALS

It is our mission to educate, connect, and advocate on behalf of members and stakeholders in the global electromagnetic warfare community. With that in mind, these are five strategic goals to become the AOC that we want to become in 2026 and beyond.

1. Grow our global membership commensurate with our market to reach at least 20,000 individual members and 350 industry members by 2026.
2. Build an advocacy and communications enterprise to deliver timely and professional resources and support to stakeholders.
3. Diversify streams of revenue to strengthen our ability to adapt to changing business environment.
4. Strengthen international programs to reflect our global presence by increasing international membership, enhancing membership experience, and developing a plan to improve member engagement.
5. Grow professional development certification and STEM programs in accordance with recently established roadmaps.

2023 GOALS

- MEMBERSHIP EXPANSION
 - Develop and execute a strategy for membership outreach and retention.
 - Develop a Communications and Marketing plan to support membership growth.
 - Overhaul current membership model/structures.
 - Evaluate Chapter programs.
- ADVOCACY AND COMMUNICATIONS ENTERPRISE
 - Improve the creation and distribution of original content to complement the *JED* and other AOC/Naylor products
 - Continue to build the congressional outreach and education program.
 - Establish a Technical Advisory Committee to determine regular technical deliverables for distribution to AOC members, global stakeholders, and other organization conferences, including NATO Subgroup 2.
 - The AOC History Committee to develop and execute history initiatives.
- DIVERSIFY STREAMS OF REVENUE
 - Build on the success of AOC Podcasts – *From the Crows' Nest* (FTCN) and *History of Crows* (HOC)
 - Build on the success of existing conferences and the annual convention.
- INTERNATIONAL EXPANSION
 - increase AOC stakeholder outreach to international chapters and events.
 - Establish a relationship with NATO Subgroup 2 and figure out what role AOC can play with the Subgroup.
 - Assess the feasibility of establishing a sustainable global operations presence; Develop and collect RFPs for a 2024 study.
- EDUCATE
 - Evaluate the recommendations from the McKinley assessment.
 - Build upon the successful inaugural Future 5 program and determine the second and third-order effects of the program to ensure the future success.
 - Assess the interest in AOC chapters facilitating internship and mentorship matching
 - Evaluate the structure of the AOC Educational Foundation and the Board of Governors
 - Assess the options for growth in the Educational Foundation

AOC FOUNDATION



AOC EDUCATION FOUNDATION

2022 AOC Education Foundation Board of Governors

President	Glenn "Powder" Carlson
President-Elect	Brian Hinkley
Secretary	Mark Schallheim
Treasurer	Greg Patschke
International Exec	Sue Robertson
Regional Directors	Karen Brigance, Rick Lu, Dennis Monahan, Myles Murphy, Jurgen Opfer, Sue Robertson, Mark Schallheim, Wayne Shaw, Jim Utt
Past President	Muddy Watters
Appointed Directors	Gary Lyke, Chuck Quintero

Meetings

There were four (4) Board of Governors meetings held in 2022.

Date	Description
March 17, 2022	Virtual
May 2, 2022	Virtual
August 18, 2022	Virtual
October 25, 2022	In-Person

Foundation Governing Documents

The Education Foundation Governing Documents can be found on the AOC website after you login under the Foundation tab on the top bar.

Scholarships

2022 Program Highlights

STEM Students of the Year Scholarship - AOC, made possible by a \$25,000 donation from Raytheon, awarded two \$12,500 scholarships; we partnered with an independent group to review the applications and select two winners:

- Annie Ostojic – Stanford University in EE
- Samuel Weiss - University of Illinois in Urbana-Champaign (UIUC) in Systems Engineering

Warrant Officer Scholarship - With a \$5,000 donation from the Laurie Buckhout Foundation, AOC matched this donation and awarded a \$10,000 scholarship. AOC partnered with the US Army Cyber School in Fort Gordan, GA to review the applications and select the winner.

- CW3 Douglas B. Price, USA

AOC Chapters gave out approximately \$150,000 in scholarship money in 2022. Between HQ and Chapters, approximately 110 individuals received some form of scholarship from the AOC.

AOC Future Five Program

The Future 5 program, created to acknowledge five young professionals under the age of 30 each year. The idea of the Future Five is to honor and encourage some of the best and brightest young leaders in the industry today and give their colleagues and peers something to aspire to. The Future Five will represent young professionals setting the bar remarkably high as they build their careers.

- Received 18 completed applications, all of which were talented individuals. The winners were recognized at the Annual Convention.
- The winners were:
 - TSgt Joshua Kozak, USAF/694th Intelligence Surveillance and Reconnaissance Group
 - Piotr Kulik, Meta Magnetics Inc.-Natick, MA
 - Ryan Loehrlein, NSWC Crane, Crane, IN
 - Rachel Norris Brody, Maxar Technologies, Ypsilanti, MI
 - Ethan Skemp, NAVAIR, Pt Mugu, CA

Financial Status

The AOC Foundation balance as of December 2022 is \$202,297 which includes the following donations:

- \$25,000 – 2022 Raytheon Scholarships – Raytheon Missiles & Defense
- \$5,000 – 2022 Warrant Officer Scholarship – Laurie Buckhout Foundation
- \$17,818 – 2022 individual contributions

AOC Muddy Watters STEM Program

Vision

Investment and development of our "young" crows through EMS STEM education programs, mentorships, and AOC events encouraging collaboration while ensuring the successful growth of our "EMS Leaders of Tomorrow".

Mission

The Association of Old Crows Education Foundation 501 (c)(3) organization provides a dedicated venue for AOC Chapters to post EMS STEM events fostering open communication and the sharing of ideas through our AOC website, Subject Matter Experts (SMEs) and by hosting global STEM events to include the Annual Convention to promote our chapters, academia, industry, and government.

2022 Program Highlights

- With the sudden passing of Muddy Watters in February 2022, the Board of Governors renamed the AOC Educational Foundation STEM Program to the "AOC Muddy Watters STEM Program".
- The Board of Governors approved the creation of an award recognizing an AOC STEM participant who has provided outstanding academic achievement or contribution to the AOC Muddy Watters STEM Program. Candidates for the award may be instructors, mentors, participants, creators of educational material, or other supporters of the AOC Muddy Watters STEM Program.
 - Award name: *Lt Col Stephen "Muddy" Watters (Ret.) STEM Educational Award for Expanding Knowledge of the Electromagnetic Spectrum*
- All planned STEM activities for 2022 were put on hold until the completion of the McKinley Advisors review of AOC/AEF Educational activities in mid-2023.
- The major efforts for the committee will be to collaborate with AOC Chapters' current and future STEM programs, as well as other STEM efforts by the government and/or industry.

2023 AOC Education Foundation Board of Governors

President	Brian Hinkley
Vice-President	Myles Murphy
Secretary	Dennis Monahan
Treasurer	Greg Patschke
International Executive	Erik Bamford
Regional Directors	Erik Bamford, Karen Brigance, Amanda Brockermeier, Dennis Monahan, Myles Murphy, Jurgen Opfer, Mark Schallheim, Wayne Shaw, Jim Utt
Past President	Powder Carlson
Appointed Directors	Jesse Bourque, Tuhin Das