Chesapeake Bay Roost Newsletter

May 2026

This Issue:

- Enabling Faster Military Program Acquisition
- Three Local Scholarships Awarded!
- Great EMSO MatLab Model Tech Talk

2026 Upcoming Events

Technical Talks

July 30: Spectrum Control will present a lunchtime technical talk from 11:30 am – 1 pm at JHU/APL and via Zoom on the topic of composable, software-definable, building blocks including 3U-VPX SOSA systems and applications (more details at end of newsletter).

Let us know if interested in taking one of our open Technical Talk Slots!

Aug 20 TBA

Sep 30 TBA

Oct 29 TBA

Scholarships Applications

Our Chesapeake Bay Roost awards scholarships to local high school students annually. The process for 2026 has just completed and we are selecting winners! More details at end of newsletter.

Thanks to Our Chapter Sponsors!

Our chapter provides scholarships to local youth and chapter events for EW professionals. These activities quickly exceed what the chapter can achieve simply on AOC national chapter funds. We are truly thankful for Axillon Aerospace (previously Parker Meggitt), Annapolis Micro Systems, and Keysight Technologies for contributing financially in support of these endeavors. Please consider working with them for your product needs.

https://www.axillonbaltimore.com/
Previously Meggitt Baltimore, Inc.
3310 Carlins Park Drive, Baltimore, MD 21215

https://www.annapmicro.com/
190 Admiral Cochrane Dr Ste 130, Annapolis, MD

www.keysight.com
1900 Garden of the Gods Road, Colorado Springs, CO

We are seeking financial sponsorship to support our club activities and scholarship benefits we provide to the community. Please contact the board at AOC.ChesapeakeBay@gmail.com for reasonable rates.

Note: The content of articles is taken directly from open source, unclassified materials cited below each article for the purposes of stimulating relevant EW discussions between chapter members. All sources are assumed to be valid, but no specific fact checking has been applied to the content of the cited articles. Articles compiled by Chapter Secretary, Joe Sluz.

Enabling Faster Military Program Acquisition

The traditional military equipment acquisition process follows the Department of Defense (DoD) Acquisition Framework (DoDAF). While large systems are generally felt to be a slow acquisition process, the DoD Instruction 5000.80 details methods of rapid prototyping and fielding. In this case, the product has to be fully fieldable withing 5 years. The Urgent Capability Acquisition must complete a product within 2 years for less than $525M in research and less than $3B in procurement.[1]

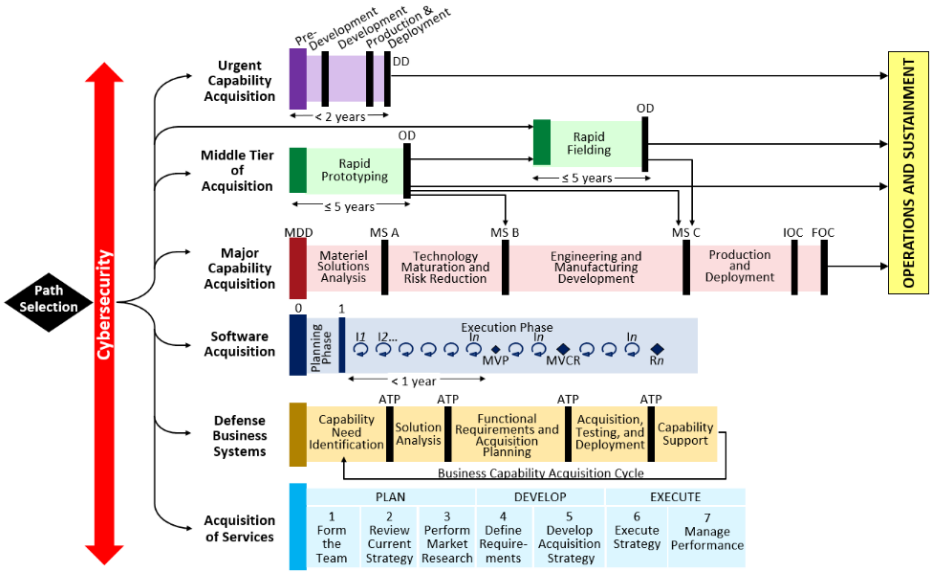


Figure from https://aaf.dau.edu/

There is dissatisfaction with this norm, however, a recent memo "Transforming the Warfighting Acquisition System to Accelerate Fielding of Capabilities" states "The Defense Acquisition University (DAU) will be revamped."[2]

Ukraine serves as an example of a massive overhaul in military material acquisition and fielding. Ukraine has proven that asymmetric approaches can be quite effective and can reduce development/production timelines under the pressure of survival. Their domestic military hardware production increased six-fold from 2023 to 2025[3] Drone production rates now exceed 200K per month[4]

Ukraine's battle-tested drone industry now leads the world industry, flooding the battlefield with cheap FPVs, tactical UAVs and long-rang strike systems (Picture source: Ukrainian MoD).

Figure from https://www.armyrecognition.com/news/aerospace-news/2025/ukraine-emerges-as-world-leader-in-drone-technology-driven-by-battle-proven-innovation

The number of drones produced went from 600K to 2.2M from 2023 to 2024 and 96% of all drones are now locally produced. The other interesting aspect is the manufacturing is widely distributed with over 500 drone manufacturers and 70% of parts sourced locally. There are some comments that to maintain quality, some level of standard may be imposed soon, which is expected to reduce the vendor list size, as not all may be able to meet added requirements with some items coming from small garage shops. The Ukraine government incentivized manufacturers to drive local component usage upward. However, as companies scale capacity, they face the opposite problem of not having sales to maintain the production line to maintain the capacity rate. Maintaining production at scale requires a continual sale of product, and some Ukraine firms are only at 37% capacity. The government is exploring methods to fix the situation, such as allowing limited export sales. [5]

In this author's opinion, a likely enabler of Ukraine's success was tight feedback between the actual engineers/designers and the warfighter. In this case, the environment collocated designers with the users, a key feedback path that can get distorted under a more traditional requirements-driven acquisition, where the intent of the acquisition can get distorted. See figure below as a cartoon example of requirements distortion.

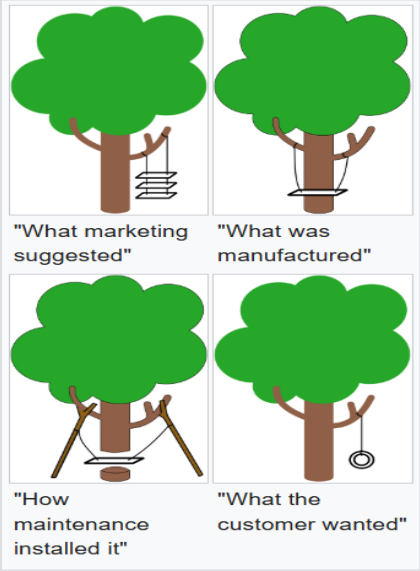


Figure from https://en.wikipedia.org/wiki/Tree_swing_cartoon

The author wonders if the many layers of large companies mixed with government requirements drafting can create a similar distortion of product requirements vs actual needs. A small company has a reputation to react and be more responsive to the changing nature of real-life requirements, especially if designers observe the warfighters challenges first hand. However, a large company has at its disposal vast resources for all aspects of product development and production, that would imply an expected successful execution of a new product design. Unfortunately, many products tend to become overbudget and latent schedule. Is this due to poor requirement resolution or bad company execution? In the US, the trend to consolidate companies trends upward, eliminating competing companies. Can a company become too large, and due to lack of consistent sales, is unable to maintain its size, and then downsizes and loses key expertise, making the company a false shell in original capability?

Countries such as the US are trying to come to terms with these challenges. An example is Executive Order 14307—Unleashing American Drone Dominance which promotes the use of domestic production to attempt to eliminate the restrictions of flight approvals.[11]

Goals of having more companies respond to needs, and keep companies with continual revenue to ensure long term survival was discussed in the Department of War's "Rebuilding the Arsenal of Freedom" which desires to "Attract increased private capital investment to accelerate the creation of new companies, expand current factory production rates, and improve innovation"[6] "Getting away from specific requirements in favor of industry-led solutions to broader problem sets has been a wider push across the Department of Defense."[7]

In relation to Electronic Warfare equipment, "In the latest in a strategic shift, the Army has issued a call to industry, broadly soliciting solutions for the electromagnetic spectrum rather than outlining specific needs as usual....Our modern approach of sharing upfront,

broad problem statements through a **CoN** [Characteristics of Need document]—as recently demonstrated in the Next Generation Command and Control effort.

The CoN identifies four general areas for which the Army is seeking solutions:
1. Attack: systems for jamming and denying the use of the spectrum to the enemy for communications, sensing and navigation;
2. Support: systems used for sensing, identifying and locating signals and emitters;
3. Protect: systems capable of blocking enemy jamming and ensuring emissions control, reprogramming and obfuscation of signals, and;
4. Common services: a standard baseline that all EMSO [electromagnetic spectrum operations] systems, which are primarily software based, can be built into and share data exchanges."[8]

The Navy is likewise pursuing speed to fleet approaches. Two senior Navy officials said they're willing to accept some industry friction and take "calculated risks" to get the Modular Attack Surface Craft program right.[9]

The five key changes by the Pentagon are:

"...
1. Speed is Top Priority
The new language from the Pentagon suggests it is willing to accept trade-offs in cost and performance to accelerate fielding timelines, and bureaucratic reviews and redundant oversight layers will have to prove they add value to delivery timelines or be eliminated. ...

2. Program Acquisition Executives
Historically, the Department of War (DoW) has oriented the acquisition enterprise of weapons programs with a Program Executive Office (PEO) managing each effort." This "responsibility will shift to wider Portfolio Acquisition Executives (PAE), where a single official is accountable for many interrelated programs... and has the authority to move funds between programs based on performance and urgency, with... compensation tied to delivery time, competition, and mission outcomes.... Officials will be authorized to make pragmatic trade-offs, such as prioritizing "good enough" capabilities now over waiting for perfect solutions that arrive too late.

3. Commercial-First Philosophy
...The reforms direct officials to favor rapid acquisition methods such as Other Transaction Authorities and Commercial Solutions Openings, instead of defaulting to the more lengthy and rigid Federal Acquisition Regulation... This shift aims to make it easier for commercial and dual-use companies, particularly the growing wave of venture-backed defense tech startups, to compete alongside traditional defense primes. The memo also calls for the creation of an Economic Defense Unit to help deploy capital through grants, loans, and investment partnerships, further blurring the lines between government procurement and private-sector innovation.

4. Workforce Transformation

"...suggest a strong desire to overhaul the mindset of the existing acquisition workforce"... emphasizing decision-making, adaptability, and industry exchange over compliance-based training." ...Industry members are being told to move fast, take smart risks, and embrace change. The traditional defense primes resistant to this shift may "fade away," while those aligned with the new pace of competition will thrive.

5. Industry Incentives

... "Incentives mean companies will be rewarded for delivering products ahead of schedule but will also face proportional penalties for delays... and "generate "investable demand signals" and unlock private capital for defense technology firms through mechanisms like advance market commitments and risk-sharing.

This shift could require defense companies to invest their own capital to achieve the necessary speed and scale, with a clear warning that slowing down risks losing out on Pentagon contracts.

In summary, the recent news out of the Pentagon marks one of the most consequential shifts in U.S. defense procurement in decades. The future of defense acquisition will be faster, flatter, and more commercially integrated, favoring leaders and companies that can innovate at the speed of relevance."[10]

Traditional Contracting Vs Agile Contracting Photo courtesy of ChatGPT!

1. https://aaf.dau.edu/aaf/uca/
2. https://www.pilieromazza.com/warfighting-at-warp-speed-why-defense-contractors-must-track-the-department-of-wars-acquisition-overhaul/
3. https://www.kyivpost.com/post/48963
4. https://www.armyrecognition.com/news/aerospace-news/2025/ukraine-emerges-as-world-leader-in-drone-technology-driven-by-battle-proven-innovation

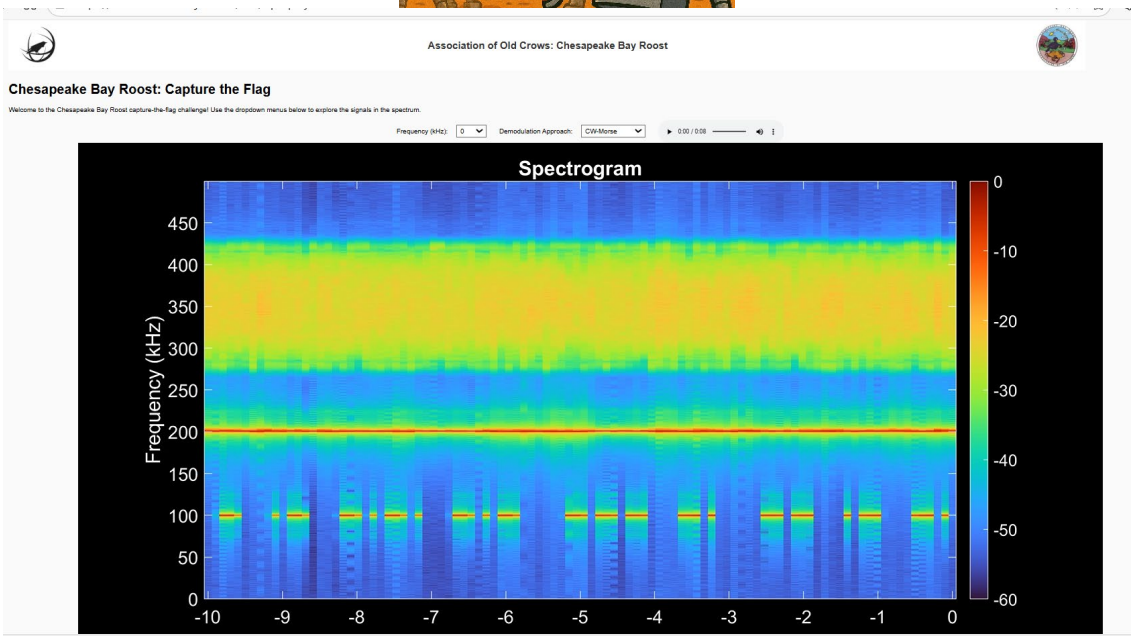
5. https://gssr.georgetown.edu/the-forum/regions/eurasia/a-first-point-view-examining-ukraines-drone-industry/
6. https://arpa-h.gov/sites/default/files/2025-11/DoW-Acquisition-Transformation-Strategy_Nov-2025.pdf
7. https://breakingdefense.com/2026/03/armys-new-flexible-approach-to-ew-could-lead-to-programmatic-changes-official/
8. https://breakingdefense.com/2026/02/army-issues-broad-appeal-to-industry-for-electromagnetic-spectrum-solutions/
9. https://breakingdefense.com/2025/09/be-uncomfortable-navy-wants-new-usv-to-challenge-the-status-quo/
10. https://www.idga.org/command-and-control/articles/five-takeaways-from-the-pentagons-sweeping-acquisition-reform-plan
11. https://www.federalregister.gov/documents/2025/06/11/2025-10814/unleashing-american-drone-dominance

Informative EMSO MatLab Event

An expanded technical talk was provided by MathWorks focusing on modeling EMSO (Electromagnetic Spectrum Operations) applications. There were three sessions starting with Building Digital Twins for EMSO Systems with MATLAB and Simulink, and then moving on to Building World Models for EMSO Scenarios with MATLAB and Simulink, and concluding with managing top-level Digital, System, and Mission Engineering: Integrating Requirements with Architectures and System Models. The event was held on the Johns Hopkins University Applied Physics Lab campus at a new room for our meetings, in Building 200, which offered a nice auditorium environment.

Scholarship Entries Received

Our Chesapeake Bay Roost awards scholarships to local high school students annually. The process for 2026 has just completed. We had 40 applications from Anne Arundel, Howard, and Baltimore counties, and we're selecting three students to receive $500 scholarships. This year, the Roost pioneered a more interactive and engaging approach to the scholarship application process by creating an online educational game. Rather than a traditional essay, students completed a series of EW related challenges (like decoding a morse code waveform). These challenges were framed as part of a science fiction scenario in which the robots have risen up against humanity. In the process of demodulating signals based on their spectrogram view, students learned about RF communication techniques.



Upcoming Technical Lunch & Learn Talks

July 30, 11:30AM

Topic: Spectrum Control

Overview of Spectrum Control products courtesy of Spectrum Control & RL Engineering with focus on composable, software-definable, building blocks including 3U-VPX SOSA systems and applications. Spectrum Control SCi Blocks enable rapid integrations and upgrades using modular elements across form factors. These designs are suitable for EW/ISR, Radar, Air-launched Effects, Smart Munitions, and UAVs. Modules include 2 GHz IBW 8 channel tuners covering 20MHz -18 GHz, Altera Agilex embedded processing providing 0.1-32 GHz instantaneous bandwidth, and RF System-in-Package products that enable expansion of coverage from 18-40 GHz. These products address requirements of legacy, current, and next-generation systems.

https://www.spectrumcontrol.com/products/rf-digital-blocks

Johns Hopkins University APL 11100 Johns Hopkins Rd, Laurel, MD Kossiakoff Center KC7/8 Rooms

Agenda:
11:30-11:50 Lunch for those onsite
11:50-12:00, Chapter News
12:00-12:45 Technical Talk
12:45-1:00 Q&A

Please RSVP at
https://forms.gle/6SgQU3Mk59BMcjF47

Zoom Link:
https://jhuapl.zoomgov.com/j/1659165956?pwd=UQLsCKu9rbjtu8yoOl6oc30b6xvSHB.1
Meeting ID: 165 916 5956
Passcode: 192798

Advertise Your Company Here!

Did you know as of 12/1/25 this Chesapeake Bay Roost has over 450 current members in its database?

Our membership represents major EW centers in this area, including:

- Axillon Aerospace
- BAE Systems
- Boeing
- Booz Allen Hamilton
- CACI
- CEA Technologies
- Johns Hopkins Applied Physics Laboratory
- Multiple branches of the Department of Defense
- Northrop Grumman Corporation
- Rohde & Schwarz
- Raytheon
- Textron Systems
- WGS Systems
- And many others!

We are seeking sponsorship to support our club activities and scholarship benefits we provide the community.

Space is available here to target your advertisement/ announcements to our select membership!

Please contact the board at AOC.ChesapeakeBay@gmail.com for reasonable rates

Advertise Your Company Here!

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https://www.facebook.com/profile.php?id=61551521264680

www.linkedin.com/company/association-of-old-crows-chesapeake-bay-roost

https://twitter.com/AOCBayRoost

https://www.instagram.com/aocbayroost/

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Outreach:	Sarah Willenbrink
Awards/Scholarships:	Paul Kennedy
Directors:	Sunita Bhatia, Niels G. Eegholm, Joseph Sluz

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AOC Events

June 2-3, 2026
Cyber/Electronic Warfare Convergence
Charleston, SC

July 28-30, 2026
EW Capabilities & Gaps
Crane, IN