

[defensenews.com](https://www.defensenews.com)

Jammed and confused: Alaska trial shows pitfalls of fielding US drones

Courtney Albon

11–14 Minuten

FAIRBANKS, Alaska — During the last few weeks of June, dozens of aircraft gathered on the flight line at Eielson Air Force Base in Alaska as part of Red Flag — a premier, multinational exercise the base hosts each year. The event offers a venue for the U.S. and its allies to demonstrate advanced, tactical air combat and prepare military units for wartime operations.

About 20 miles to the northwest of Eielson on a sparse, dirt range just outside the Army's Fort Wainright, a very different kind of testing and training demonstration overlapped with the latter half of Red Flag. The Defense Innovation Unit, the Pentagon's commercial technology hub, chose a handful of companies to trial small, long-range attack drones designed to navigate and hit targets amid attempts to jam their signals.

While much smaller in size and scope than the venerable Red Flag drill nearby, DIU's tests hit on themes that may be just as consequential for the future of aerial warfare — the role of drones in modern combat, and whether the Pentagon can help stimulate the expansion of the domestic industrial base and transform its own internal bureaucracy in a way that allows it to buy those systems in meaningful quantities.

The Pentagon for years has talked about [the importance of autonomous systems](#) in military operations and the prominent role drones have played on the battlefield of Ukraine. More recently, the Trump administration has signaled an interest in investing in the commercial drone industry and reducing some of the policy barriers that make it harder to buy, test and field these systems.

In a July 10 memo, Defense Secretary Pete Hegseth took that further, [directing sweeping reforms](#) to how the military services acquire small, uncrewed air systems and giving troops on the ground more authority to directly test and buy them.

It's not clear yet whether the U.S. government's more recent push to invest in domestically-produced drones and the Pentagon's new reform efforts will lead to change. While the language is stronger and the directives are coming from the White House, past efforts to change DOD acquisition and funding processes and realign priorities within the military services have yielded little progress.

Amid that churn of momentum and uncertainty, DIU's testing offered a snapshot, though incomplete, of the current readiness of the military's acquisition system and the [U.S. drone industry's](#) ability to meet the moment.

Defense News traveled to Alaska to observe the testing, which DIU officials said highlighted the challenges of moving fast in a stovepiped bureaucracy that wasn't designed for speed.

Trent Emeneker, who leads several autonomy projects for DIU, said the event underscored a reality that many in the national security community are already grappling with — the U.S. military's aerial-drone capabilities are lagging behind its competitors.

“There is so much that we need to do right now in the uncrewed systems

space,” Emenecker told reporters. “We are just really far behind, and we have to catch up.”

A project without a partner

Staged over four days, the drone testing was part of [a DIU project called Artemis](#), which aims to identify — and then buy en masse — low-cost commercial UAS that can fly at long ranges, strike enemy targets and operate through electronic warfare countermeasures like signal jamming and spoofing.

On the range in Alaska, DIU officials wanted to see if the Artemis drones could acquire and maintain targets and then hit them with some degree of accuracy when their navigation and communication signals were disrupted.

Four companies are on contract for the project: AV — [previously AeroVironment](#) — Dragoon and two Ukrainian firms that are each paired with a U.S.-based software firm, one with Swan and the other with Auterion.

Only AV and Dragoon were in Alaska for testing. The Ukrainian firms, which haven’t been disclosed due to security concerns, are flying their drones in operations at home. One of the firms has already met its contractual testing requirements, Emenecker said. The second was recently targeted in a Russian attack that destroyed its production facilities and is now working to rebuild. It hopes to start testing in the coming weeks.

AV brought a prototype system with an experimental software baseline that it designed specifically for Artemis. The rail-launched drone, built for the one-way attack mission, uses a navigation system that isn’t dependent on satellites like GPS.



AV gets ready to launch its uncrewed air system during Defense Innovation Unit flight testing in Fairbanks, Alaska. (Courtney Albon, Defense News)

Dragoon's Artemis offering is a vertical take-off-and-landing drone called Sender, which it initially designed under a small contract with the Defense Advanced Research Projects Agency. The aircraft was designed to balance affordability and flexibility with the ability to fly longer-duration missions.

Like most DIU projects, Artemis was created to rapidly test and validate capabilities that military users have said they need in the field.

The effort originated as part of a supplemental spending package for

Ukraine that Congress approved last year. In response to requests from operators in Europe and the Indo-Pacific, lawmakers gave DOD around \$16 million to quickly identify a solution.

In just seven months, DIU solicited proposals, reviewed submissions and put four companies on contract to build prototypes — much faster than a traditional DOD acquisition program.

A key feature of [the organization's approach](#) is that it partners with acquisition offices in the military services and combatant commands to buy and field the commercial capabilities it validates. Without an acquisition partner, projects flounder, victims to the infamous “valley of death” — the often-terminal phase between when an effort begins and when it's adopted by an end user.

Despite the heavy use of cheap attack drones in Ukraine and the Middle East and the Pentagon's stated desire to increase its inventory of uncrewed systems, DIU has struggled to find an acquisition partner in the services for Artemis.

Emeneker and his team have been pitching the project to program offices since last year but have come up short. Services are hesitant to buy in and put time and resources toward a system that isn't tailored to their specific requirements, he said.

“We continue to make phone calls every day and talk to program offices, talk to people who are interested that theoretically have money. I don't have a great answer. We don't have a partner,” he said. “That's what I have spent the most time on with this project.”

The hope going into testing was that the systems' performance would help DIU make its case, but the results were not what Emeneker envisioned. If DIU can't find an office that wants to take over the effort, companies that meet the contract's requirements will still receive what's

called a “success memo” that allows them to quickly enter into a production contract if a DOD office wants to buy their system.

But even if some firms are ready to transition, Emenecker said, it’s possible Artemis capabilities could end up without a home.

Testing troubles

While the companies made progress throughout the test event, neither performed as well as DIU expected.

In one scenario during the second day of testing, AV’s drone failed repeatedly to find its target when jammed and ultimately crashed into a hill. In another run on the same day, Dragoon’s system flew past its target, made impact and went up in flames.



Dragoon's Sender uncrewed aircraft caught fire after missing its target during attack drone testing near the Army's Fort Wainright in Fairbanks, Alaska.
(Courtney Albon, Defense News)

Critically, neither system performed well under EW conditions.

Emeneker said it's too early to diagnose why the drones underperformed or to declare the project a failure.

"Without looking at the data and analyzing it, it's really hard to know because understanding the interplay of the jamming... software bugs, it gets complex," he said. "I don't want to jump to conclusions but it was not what I would have hoped for or wanted to see."

He also noted that while the platforms weren't perfect, that's not the goal. The objective of Artemis is to identify a baseline throw-away drone capability that offers a more affordable option than high-end munitions. By the end of testing, the systems had both made impacts and were closer to hitting their targets.

Still, Emeneker is concerned about what the preliminary outcome says about the state of the U.S. drone industrial base.

"If we had to go to war tomorrow, do we have what we need?" he posited. "No. So, how do we fix that? That's what we're trying to do is fix that capability."





AV's Artemis prototype drone crashed into a hill during a test event near the Army's Fort Wainright in Fairbanks, Alaska. (Courtney Albon, Defense News)

Pendulum swing

DIU has been trying to address some of the challenges that plague the U.S. drone industrial base for years.

In 2020, it started [a project called Blue UAS](#) to make it easier for units in the field to buy small drones. Chris Bonzagni, a former DIU program manager who now runs his own defense and dual-use consulting firm, was part of the team that helped stand up the project, which vets commercial drones to make sure they comply with U.S. laws that restrict the military from buying uncrewed systems whose key components are made in China.

Bonzagni, who was onsite to support Artemis testing, said Blue wasn't designed for program managers or bureaucrats — it was intended to meet the needs of tactical units.

“The vision for Blue UAS was, we're all infantry guys; I'm a former enlisted guy. How do I get a list of drones that, if I'm a staff sergeant in

Iraq at the time, they can just purchase with their [government purchase card],” he told Defense News. “That was the original intent.”

While Blue has since become the standard across the U.S. government for validating drone compliance, Bonzagni sees the effort as a failed attempt to get cheap drones into the hands of the troops who need them.

A lack of resources and a convoluted DOD acquisition system prevented the program from scaling. And policies that required companies to prove compliance with every hardware or software upgrade hampered innovation. Just as Ukrainians were [fielding drones by the thousands](#) to hold ground in their resistance to Russia’s invasion, the U.S. was struggling to even get systems to its own operators.

DIU is working to [address some of the issues](#) with Blue and recently announced changes designed to expand its cleared list to more companies. Hegseth’s recent memo calling for “drone dominance” directs the Defense Contract Management Agency to help scale the effort, which could drive additional resources toward the project and reduce some of the policy barriers that has stifled its potential.

Emenaker said that through projects like Blue UAS and Artemis, DIU is trying to help refocus the Defense Department’s acquisition apparatus on tactical units in the field. Another new effort called Project GI aims to test “ready-now” drones in operational environments — crucial for ensuring that a system will actually work as intended in real-world conditions.

“That’s who we want to focus on. It’s not a lab. It’s not the colonel. It’s not the sergeant first class. It’s the people on the front line,” he said. “The pendulum is all the way over here. We’re trying to swing it back to get more to that end user.”

(Editor’s note: An earlier version of this story mischaracterized the

system AV brought to the Artemis demonstration.)

Courtney Albion is C4ISRNET's space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department's most significant acquisition, budget and policy challenges.