

The Velocity Gap

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AUTHOR

Shane Schreck

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Autonomous systems are being built faster than the institutions meant to control them. The audit cannot run at the speed of the deployment.

A new entrant put a fighter aircraft into the air faster than any new fighter program in seventy years. The story that traveled is that speed beat the incumbents. That is the smaller story. The larger one is what that speed does to oversight, because the same compression is now happening to autonomous software, and the instruments that hold systems accountable were built for things that hold still.

THE 556-DAY SIGNAL

In June 2026, Anduril founder Palmer Luckey described, in a widely circulated interview clip, how his company moved on a U.S. Air Force fighter program against the largest defense primes in the country.

"We went from signing a contract with the Air Force to first flight in 556 days. Which is, as far as I know, the fastest new fighter development program since the end of the Korean War." Palmer Luckey, Anduril, interview clip, June 2026

Take the figures as his characterization rather than as an independently audited record. The point does not depend on the exact count. The point is the shape of the curve. A capability that the established process measured in many years was delivered in a window short enough to fit on a single contract. The reading that traveled fastest was the obvious one, that a faster company beat slower ones. That reading is correct and it is also the least interesting thing in the clip.

The interesting thing is what happens to everything built to sit on top of a slow process when the process stops being slow. Oversight was one of those things.

SPEED IS NOT THE ANOMALY. IT IS THE NEW BASELINE.

It would be comfortable to file this under defense, a story about one company and one airframe. It is not a defense story. It is the visible edge of a condition that now runs through every system with autonomous capability. The interval between a capability being conceived and a capability being in production is collapsing across the board, and in autonomous software it has collapsed further than anywhere else.

An autonomous system is worse than fast to build. It is fast to change. A hardware program reaches first flight and then holds a configuration. A language-model-driven system reaches production and then keeps moving, with new tool authorities between sessions, new orchestration permissions without a release event, new behavior on

the first input no one anticipated. The 556 days is the part you can see. The part you cannot see is that the system keeps redefining itself after it ships, every day it runs.

THE AUDIT RUNS AT THE WRONG SPEED

Every oversight instrument the modern economy relies on assumes it can move slower than the thing it is checking. The annual audit, the periodic certification, the scheduled review. The cadence was never an accident. It was affordable precisely because the asset held still between visits. You could inspect a system in the first quarter and trust the finding through the fourth, because the system you inspected was the system that remained.

Remove that assumption and the entire instrument inverts. An oversight cycle that is slower than the system's rate of change does not certify the system. It certifies a snapshot the system has already left behind. The gap between the moment of inspection and the moment of reliance becomes a window in which the system operates with no live accountability, and the faster the system moves, the wider that window opens. This is the velocity gap. It is not a flaw in any particular audit. It is what every periodic audit becomes when it is pointed at something that moves faster than its cadence.

YOU CANNOT CLOSE IT BY AUDITING FASTER

The obvious patch is to shorten the cycle. Quarterly becomes monthly becomes weekly. Roll the certification forward, re-attest more often, narrow the window. The patch treats the symptom and leaves the cause untouched. However short the interval, the asset still changed between any two checkpoints, and the system still spent the interval acting on inputs no reviewer saw. A faster audit is still an audit of a snapshot. It moves the window. It does not remove it.

The cause is not that the audit is too slow. The cause is that oversight was placed outside the system, on a separate clock, looking in. As long as accountability lives on its own cadence, it will always lag a system that sets its own. Closing the gap requires moving the control off the reviewer's clock and onto the system's, which means putting it inside the runtime.

CONTROL AT THE SPEED OF THE SYSTEM

Runtime control is a different instrument from periodic audit, designed from the opposite premise. Instead of inspecting a system on a schedule and trusting the finding until the next visit, it enforces the rules in the system's own persistent layer as the system runs, and it produces evidence of each consequential action at the moment that action happens.

The properties that follow are the ones the velocity gap destroys and a runtime instrument restores. Behavior that varies continuously is treated as the default condition rather than an exception to be caught at the next review. The operational boundary the system can redefine at runtime is contained structurally rather than declared on a form. The narrative the system produces about itself is not accepted on the operator's word, because every assertion carries a verification a third party can check without trusting the platform that issued it. Accountability stops being a thing that arrives quarterly and becomes a thing that exists continuously, on the same clock as the system it governs.

This is the architecture ALEETH builds, and the reference platform that runs it is in production today. The claim here is narrow and deliberate. It is not that the gap is already closed across the industry. It is that the shape of the

instrument that closes it is now defined, and it is not a faster version of the old one.

WHERE THE GAP CUTS DEEPEST

The autonomous defense system is the case where the velocity gap is least forgiving, which is the irony sitting inside the 556-day clip. Systems in that class are safety-impacting by definition. They operate in the open. They are acquired and fielded under federal authority. The United States has already written down what oversight of this class must include. OMB Memorandum M-24-10 sets minimum risk-management practices for safety-impacting and rights-impacting AI, among them ongoing monitoring, human oversight and accountability, and the records to reconstruct a consequential decision after it is made. The NIST AI Risk Management Framework names the same outcomes across its functions.

Read those obligations next to the velocity gap and the conflict is direct. Ongoing monitoring of a system that changes faster than the monitoring cycle is not monitoring. Accountability for a decision a system made three weeks before the next review is not accountability. The frameworks already require the outcome. The velocity at which these systems are now built and changed is exactly what makes a periodic instrument unable to deliver it. The speed that wins the contract is the same speed that creates the governance obligation, and a slow instrument cannot satisfy a fast one.

WHAT IT TAKES

An instrument designed from the velocity premise rather than retrofitted to survive it. Control enforced where the system runs, not asserted on a schedule the system has already outpaced. Evidence generated as each action occurs, not reconstructed from memory at the next review. Verification that any third party can perform at any later date, against the current state of the system, without depending on the issuing platform's continued cooperation. Accountability that runs on the system's clock because it lives inside the system, not beside it.

That is the instrument the autonomous deployment surface now requires, and the speed on display in a 556-day program is the reason it can no longer wait. The Institutional Control Architecture standard, published at publications.aleeth.com/standard/, is the proposed shape of that instrument. The instrument is in production today. The conversation about ratification is open.

The headline was that a new entrant beat the old guard on speed. The lesson underneath it is that oversight built on a slower clock than the system it watches certifies the past and trusts it as the present. You do not close that gap by auditing faster. You close it by moving control onto the system's clock, inside the runtime, where the velocity that built the system is the velocity that governs it.

Shane Schreck is the founder of ALEETH and the author of Institutional Control Architecture. ALEETH is building the independent verification layer for autonomous AI deployment. He is a U.S. Army Veteran.

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