



PLATFORM OVERVIEW · 2026

Technical Solutions for Regulated *Industries.*

TRIDENT · STARS · AURUM
Defense · Aerospace · Healthcare
Critical Minerals · Maritime Logistics

AEGIS COMPLIANCE OS, INC.
CAGE: 19Y32 · SDVOSB · WOSB
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AEGIS



THE PROBLEM

Regulated industries generate data. They rarely generate proof.

The compliance gap in regulated industries is not a capability problem — it is a translation problem. Physical systems generate continuous data: sensor readings, process telemetry, spatial records, technician actions. Regulators require structured evidence: specific controls documented to specific clauses, organized for assessor review. Between those two states, organizations fill the gap manually — with spreadsheets, tribal knowledge, and post-hoc reconstruction that fails audits, stalls certifications, and costs contracts.

This problem is not unique to one industry or one regulatory framework. It exists wherever physical operations must be documented for regulatory review — in defense manufacturing, aerospace quality management, clinical operations, critical minerals supply chains, and maritime logistics. The same gap, five different industries, dozens of overlapping standards.

THE AEGIS PLATFORM

One architecture. Every regulated environment.

Aegis builds hardware and software that closes the translation gap. Our platform captures physical events at the point of activity, normalizes them through a framework-agnostic schema, and outputs structured regulatory evidence — deterministically, without manual intervention.

CAPTURE	TRANSLATE	EVIDENCE
TRIDENT	STARS	Evidence Packages
Hardware sensors and mixed-reality overlay capture physical events at the point of activity with quantifiable precision.	Eight atomic schema tables normalize data through a deterministic rule engine into framework-specific regulatory language.	Assessors and auditors receive pre-structured documentation organized to the exact clause, control, or requirement being assessed.

Secure Translational Automated Regulatory System

Patent-Pending Provisional 63/987,480 · Filed February 20, 2026 · Non-provisional deadline February 2027

STARS is a framework-agnostic regulatory translation schema that sits between the physical world and the compliance world. It ingests structured sensor and operational data, normalizes it through eight atomic tables, and passes it through the 8-Ball deterministic rule engine to produce framework-specific evidence artifacts. The same schema serves every Aegis vertical — only the regulatory catalog changes between industries.

EIGHT ATOMIC SCHEMA TABLES

TABLE	NAME	REGULATORY FUNCTION
01	WHO	Identity, role, authorization — CMMC access control, AS9100D personnel qualification, HIPAA authorization
02	WHAT	Asset, action, object state — ITAR item tracking, AS9100D part traceability, CUI identification
03	WHEN	Timestamp, duration, sequence — CMMC audit logging, FDA 21 CFR Part 11, IMO incident timelines
04	WHERE	Location, zone, jurisdiction — ITAR geographic controls, AS9100D process environment, CTPAT
05	WHY	Requirement, clause, control — links physical event to specific regulatory obligation satisfied
06	HOW	Method, procedure, configuration — AS9100D process control, CMMC configuration management
07	HOW MANY	Quantity, measurement, threshold — QA scoring data, AURUM concentration readings
08	META	Schema version, source, chain-of-custody hash — cryptographic provenance and integrity

8-BALL RULE ENGINE

The 8-Ball deterministic rule engine evaluates the eight populated tables against the active regulatory catalog. Given the same input and catalog, it always produces the same output — no inference, no AI interpretation, no variance between assessments.

Hardware & Mixed Reality Sensing Platform

Flagship product · Licensed from the U.S. Navy / Naval Postgraduate School · CEL NPS-LIC-26-006

TRIDENT captures what regulated environments produce but cannot document — spatial data, process telemetry, and physical events — and converts them into structured regulatory evidence through the embedded STARS translation layer. It combines integrated sensor arrays with mixed-reality overlay technology to create authoritative digital twin records of physical processes as they happen.

The platform commercializes two U.S. Navy patents developed at the Naval Postgraduate School's MOVES Institute. These patents form the technical foundation for TRIDENT's ability to produce compliance-grade evidence — not documentation — from physical events.

LICENSED IP FOUNDATION · NPS CEL NPS-LIC-26-006	
US 11,138,805 Quantitative Quality Assurance for Mixed Reality Environments Enables quantifiable fidelity scoring for digital twin captures against physical ground truth. The technical basis for TRIDENT's admissibility as compliance evidence.	US 11,062,523 Creation Authoring Point Tool for Equipment Recreation as Digital Twins Enables markerless digital twin authoring — capture of physical assets without physical instrumentation of the target object. Foundational for legacy equipment documentation.

CORE CAPABILITIES

Markerless Digital Twin Authoring Captures physical assets and environments into structured digital twin representations without markers or instrumentation. Enables documentation of as-built conditions for existing and legacy systems.	Quantitative QA Scoring Produces a quantifiable fidelity score for each digital twin capture against physical ground truth — the technical basis for compliance-grade evidence, not documentation estimates.
Mixed Reality Process Overlay Overlays work instructions onto the physical workspace during operations. Simultaneously captures technician actions as time-stamped, georeferenced records for audit trail generation.	Real-Time Telemetry Capture Collects environmental, spatial, and process telemetry continuously, creating an unbroken chain of custody from physical event to compliance record through the STARS translation layer.

Catalog Ingestion Engine

Ingests machine-readable regulatory standards into the STARS schema. Adding a new framework requires updating the catalog, not re-architecting the platform.

Assessor-Ready Output

Documentation packages structured at the point of generation — organized to the exact clause, control, or requirement being assessed. No reformatting, no post-hoc reconstruction.

Electrochemical Sensing & Critical Minerals Provenance Verification

MXene Technology: US 12,132,210 · DEVCOM Chemical and Biological Center · License Application Filed

AURUM is Aegis's dedicated platform for critical minerals supply chain compliance — combining MXene-based electrochemical sensing with the STARS regulatory translation layer to produce DFARS-compliant provenance attestation records from the point of extraction through the defense supply chain.

The defense supply chain cannot verify what it cannot measure. DoD-designated critical minerals — cobalt, nickel, titanium, lithium, rare earth elements — face accelerating DFARS sourcing requirements that demand verifiable proof of composition and origin, not just certificates. AURUM generates that proof at the physical layer.

THE MXENE SENSING SUBSTRATE

MXenes are two-dimensional transition metal carbides and nitrides with exceptionally high electrical conductivity and tunable surface chemistry. The DEVCOM CBC patent (US 12,132,210) covers specific MXene-based electrocatalyst compositions and their application as selective electrochemical sensing surfaces for metal detection. By tuning the metal composition on the substrate to a specific critical mineral target, AURUM produces distinct, reproducible voltammetric signatures — the physical-layer provenance fingerprint.

SENSING PROCESS

01 SAMPLE	Dissolved mineral sample introduced to MXene sensing substrate tuned to target mineral's electrochemical profile.
02 MEASURE	Electrical potential swept across electrode. Target ions produce characteristic voltammetric signature.
03 EXTRACT	Peak potential, current, and peak shape extracted and normalized — the physical-layer provenance fingerprint.
04 STARS	Signature data structured through STARS eight-table schema with Who/What/When/Where/How Many tables populated.
05 OUTPUT	8-Ball maps structured output to DFARS critical minerals catalog — generates compliance artifact with cryptographic provenance.

TARGET MINERALS

Co	Cobalt Superalloy components, jet engines, battery cathodes
Ni	Nickel Turbine blades, hull plating, armor, stainless steel
Ti	Titanium Airframes, hull structures, missile bodies, body armor
Li	Lithium Military battery systems, autonomous vehicles, directed energy
RE E	Rare Earth Elements Precision-guided munitions, radar, sonar, night vision

TRIDENT and STARS are schema-agnostic by design. Each vertical requires new regulatory catalog content and rule sets — not a new system. AURUM extends the platform into the physical chemistry layer for critical minerals provenance.

01 — DEFENSE & DIB CMMC Level 2, DFARS/CUI, ITAR, NIST SP 800-171 Prime contractors, Tier 2/3 subcontractors, and MRO operators face simultaneous compliance obligations with zero tolerance for evidentiary gaps. TRIDENT and STARS generate assessor-ready artifact packages that manual workflows cannot produce at scale.	Primary Vertical
02 — AEROSPACE MANUFACTURING AS9100D, FAA Airworthiness, First Article, Non-Conformance AS9100D clause evidence, first-article inspection records, and non-conformance documentation generated automatically from physical production telemetry. Digital twin capture replaces manual records with quantifiably accurate representations.	Vertical 02
03 — HEALTHCARE HIPAA, FDA 21 CFR Part 11, VA Telehealth HIPAA technical safeguard evidence, FDA 21 CFR Part 11 electronic record audit trails, and VA telehealth operational documentation structured from TRIDENT's mixed-reality capture layer without interrupting clinical workflows.	Vertical 03
04 — CRITICAL MINERALS DoD Sourcing, Chain of Custody, DFARS, Provenance Verification AURUM generates physical-layer mineral provenance fingerprints via MXene electrochemical sensing; STARS structures them into DFARS-compliant chain-of-custody records and DoD sourcing attestation documents.	Vertical 04
05 — MARITIME LOGISTICS	Vertical 05

IMO MSC-FAL.1/Circ.3, USCG Cyber, CTPAT

Vessel operations and port logistics data structured into IMO MSC-FAL.1/Circ.3 and USCG cyber evidence packages. TRIDENT provides the operational telemetry layer that maritime operators currently document manually or not at all.

One schema. Every regulated industry Aegis serves.

New frameworks require new catalog content and rule sets — not platform changes. The STARS schema and 8-Ball engine are identical across all five verticals.

FRAMEWORK	VERTICAL	OUTPUT TYPE
CMMC Level 2	Defense / DIB	110 Practice Evidence Package
DFARS / CUI	Defense / DIB	CUI Handling Artifacts
ITAR	Defense / DIB	Export Control Records
NIST SP 800-171	Defense / DIB	Practice Documentation
AS9100D	Aerospace	Quality Management Clause Evidence
FAA Airworthiness	Aerospace	Maintenance & Inspection Records
HIPAA	Healthcare	Technical Safeguard Evidence
FDA 21 CFR Part 11	Healthcare	Electronic Record Audit Trail
VA Telehealth Compliance	Healthcare	Operational Documentation
DoD Critical Minerals Sourcing	Critical Minerals	Provenance Attestation Records
DFARS Chain of Custody	Critical Minerals	Supply Chain Compliance Artifacts
IMO MSC-FAL.1/Circ.3	Maritime	Cyber Risk Management Evidence
USCG Cyber Rulemaking	Maritime	Compliance Documentation
CTPAT	Maritime	Supply Chain Security Records

Schema-agnostic architecture: new frameworks are catalog updates, not platform rebuilds.

US 11,138,805	U.S. Navy · NPS CEL NPS-LIC-26-006 · Active	Quantitative Quality Assurance for Mixed Reality Environments Enables quantifiable fidelity scoring for digital twin captures against physical ground truth — the technical basis for TRIDENT's admissibility as compliance evidence. Licensed from the Naval Postgraduate School's MOVES Institute.
US 11,062,523	U.S. Navy · NPS CEL NPS-LIC-26-006 · Active	Creation Authoring Point Tool for Equipment Recreation as Digital Twins Enables markerless digital twin authoring of physical assets without instrumentation of the target object. Foundational for TRIDENT's documentation of as-built conditions for existing and legacy equipment.
Prov. 63/987,480	Aegis Proprietary · Patent Pending · Filed Feb 20, 2026	STARS Schema & Cryptographic Enforcement System The Secure Translational Automated Regulatory System — an eight-table framework-agnostic regulatory translation schema paired with the 8-Ball deterministic rule engine and cryptographic chain-of-custody architecture. Inventor: Dana Mincey-Breaux. Non-provisional deadline: Feb 2027.
US 12,132,210	DEVCOM CBC · License Application Filed · Evaluation Phase	MXene-Based Electrocatalyst and Methods of Making and Using the Same Covers the deposition of earth-abundant transition-metal nanoparticles onto a 2D MXene substrate to produce a high-performance electrocatalyst applied as an electrochemical sensing surface for critical minerals provenance verification. AURUM's physical-layer sensing foundation.

LEADERSHIP

Dana Mincey-Breaux, PMP	Founder & CEO	17 years U.S. Army Signal Corps & DoD PM · Active TS/SCI · SDVOSB · WOSB · Patent Inventor
Kori Green, PMP	Chief Technology Officer	Platform architecture & technical delivery · TRIDENT, STARS, AURUM engineering roadmap

David Harvey, MBA

Chief Financial Officer

Financial strategy, capital structure, SBIR pipeline,
enterprise contract structuring

No pitch. Just a conversation.

If you're evaluating CMMC, AS9100D, DFARS, or any other compliance posture in a regulated environment — or you want to understand what TRIDENT, STARS, or AURUM looks like deployed in your specific environment — start here.

The platform overview you are reading is the starting point. We respond personally, within one business day. No automated sequences.

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