

SOVEREIGN DUAL-PERIMETER AUTONOMOUS CONFINEMENT

Preempting Adversarial Injection, Semantic Entropy Drift, and Operator Saturation Across Critical DoD Multi-Agent Networks via Co-Pending Master Utility Patent Protection.

UNITED STATES PATENT & TRADEMARK OFFICE CO-PENDING SUITE

OFFICIAL PATENT PENDING STATUS

PILLAR I • HUMAN OPERATOR BOUNDARY

HUMAN-VIGIL™

USPTO App. No. 64/186,664 | Filed 10/28/2026

Continuous, zero-hardware behavioral micro-telemetry tracking cognitive saturation (\$CSI\$) and automation complacency (\$ADM\$), injecting dynamic friction before unverified state commits violate DoD Directive 3000.09.

PILLAR II • RUNTIME MACHINE BOUNDARY

AGENT-KINETIC / MCP-GATE™

USPTO App. No. 64/186,748 | Filed 10/29/2026

Sub-10ms deterministic Model Context Protocol proxy calculating token Shannon entropy (\$H(X)\$), verifying AST syntax invariants, and severing execution authority into hardware-attested SGX/eBPF sandboxes.

FAR 19.1406 SOLE-SOURCE

\$5,000,000

Direct statutory sole-source threshold for certified SDVOSB service awards. Rapid procurement with zero protest risk.

FAR 6.302-1 EXCLUSIVITY

SOLE-SOURCE

Patent-pending technical monopoly: Only One Responsible Source. Bypasses multi-year RFP cycles entirely.

RAPID ONBOARDING

\$15,000

FAR Part 13 Micro-Purchase credit card swipe ceiling for instant evaluation harness and COTS training manual delivery.

PRIME VENDOR & IP OWNER: Uply Media, Inc. (SBA-Certified SDVOSB)

PRINCIPAL & SOLE INVENTOR: Kyle Ransom, Chief Executive Officer (U.S. Navy Veteran)

PRIMARY NAICS: 541512 (Computer Systems Design), 541715 (R&D AI/Cyber), 513130

CAGE CODE: 9WMV4 | UEI: YPE4G8X18N67

LOCATION: Johns Creek, GA 30005

SECURITY STATUS: PROPRIETARY COMMERCIAL DEFENSE IP

1. THE DEFENSE BUYERS: WHO NEEDS THIS RIGHT NOW?

The Department of Defense, intelligence agencies, and defense prime contractors are racing to deploy autonomous agent teams for C4ISR, electronic warfare, offensive cyber operations, and kinetic logistics. However, connecting LLMs to runtime tools via the **Model Context Protocol (MCP)** creates an unmitigated national security liability.

THE OPERATIONAL ULTIMATUM: MISSION SUCCESS VS. SYSTEM HIJACK

Non-deterministic models cannot be deployed in sovereign defense operations without deterministic execution boundaries. When an autonomous agent encounters indirect prompt injection or hallucinations, it will execute invalid filesystem or network calls in milliseconds. Simultaneously, human operators supervising these streams suffer cognitive saturation and "rubber-stamp" catastrophic decisions.

TARGET DECISION MAKERS & THEIR BUDGET PAIN POINTS

Target Acquisition Entity	Strategic Pressure & Compliance Mandate	Uply Media Solution Impact
Chief Digital and AI Office (DoD CDAO)	Mandated to enforce <i>Responsible AI (RAI)</i> guidelines and build operational guardrails before agent fleets can be accredited for joint all-domain operations.	Provides mathematical, deterministic verification at the process boundary, eliminating stochastic failure.
DARPA & DIU (Defense Innovation Unit)	Urgent requirement for cyber-resilience against multi-agent swarm vulnerabilities, prompt injection in sensor data, and unauthorized API traversal.	Sub-10ms runtime tool interception with token-level Shannon entropy circuit breaking and eBPF network locks.
Defense Prime Integrators (Lockheed, Booz Allen, GD, Leidos)	Contractual liability under DoD Directive 3000.09 (Human Supervision of Autonomous Systems) and urgent need for certified SDVOSB small business credits.	Pre-packaged, patent-pending COTS architecture that de-risks multi-billion-dollar bids while fulfilling socioeconomic quotas.
CISA & Cyber Command	Zero Trust architecture mandates (NIST SP 800-207) requiring continuous verification of all machine-to-machine function calls.	Hardware-attested cryptographic enclave sandboxes (Intel SGX/AMD SEV) with ephemeral copy-on-write storage.

WHY EXISTING DEFENSES FAIL AT COMBAT SPEED

Conventional cybersecurity and AI defense tooling cannot solve this problem:

- **LLM-as-a-Judge:** Adds 500ms to 2,500ms of lag and remains vulnerable to the exact same prompt injection attacks.
- **Post-Hoc Security Information & Event Management (SIEM):** Audits and records system destruction *after* the unauthorized API call has executed.
- **Wearable Biometrics:** Eye-tracking glasses and EEG headsets fail in rugged tactical environments and trigger massive operator resistance.

2. THE UNIFIED DUAL-PERIMETER DEFENSE ARCHITECTURE

Uply Media, Inc. combines the human and machine boundaries into a sovereign, out-of-band execution confinement harness that requires zero external third-party cloud APIs.

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+-----+ | HUMAN
SUPERVISORY PERIMETER (HUMAN-VIGIL™ - USPTO App. No. 64/186,664) | | Passive Behavioral Micro-Telemetry
(Dwell Time, Commit Velocity, Shannon Edit Entropy) | |
===== | | CSI / ADM
CALCULATION ENGINE ---> If ADM > Threshold: INJECT ADAPTIVE FRICTION (ANTI-RUBBER STAMP)
+-----+ | Verified
Action Intent v +-----+
| MACHINE RUNTIME EXECUTION PERIMETER (AGENT-KINETIC / MCP-GATE™ - USPTO App. 64/186,748) | | Local Sub-10ms
Out-of-Band Tool-Use Interceptor | |
----- | | [AST Invariant
Parser] [Shannon Entropy Breaker H(X)] [DAG Graph Policy Verifier] | | | | |
+-----+ | | | | [DECISION: Breach Detected or
H(X) > H_crit?] | | / \ | | [YES: BREACH] ==> HARDWARE CUT (Socket Severed) [NO: VALID] | | Ephemeral
Memory Purged | | | Filesystem Rolled Back v | | [HARDWARE-ATTESTED SANDBOX] | | Intel SGX/AMD SEV + eBPF
Sockets | | Whitelisted Execution to Host Kernel |
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DETERMINISTIC MATHEMATICAL PROOF ENGINES

1. TOKEN-LEVEL SHANNON ENTROPY CIRCUIT BREAKER (\$H(X)\$):

The system intercepts predicted softmax distribution vectors $P(x_i)$ during MCP tool argument generation:

$$H(X) = - \sum [P(x_i) * \log_2(P(x_i))]$$

When an adversary injects prompt overrides or the agent hallucinates, probability uncertainty spikes. If $H(X) > H_{\text{crit}}$, an immutable hardware interrupt terminates the dispatch socket within sub-10 milliseconds.

2. AUTOMATION DRIFT METRIC (\$ADM\$) & COGNITIVE SATURATION (\$CSI\$):

Human operator oversight rigor is continuously calculated without wearable sensors:

$$ADM(t) = \text{MAX}(0, L_t - \beta * (1 - CSI(t)) * \ln(1 + \tau_{\text{inspect}}))$$

Where L_t is mission risk consequence, $CSI(t)$ is cognitive saturation, and τ_{inspect} is viewport dwell time. If a fatigued operator rubber-stamps high-consequence orders, the commit is intercepted and cognitive reconstitution challenges are enforced.

3. ACQUISITION BLUEPRINT & COMMERCIAL VALUE PRICING

To relate the multi-million-dollar value of these patents to DoD contracting officers and prime integrators, Uply Media, Inc. has structured three immediate, low-friction procurement tiers that solve critical budget and legal hurdles.

HOW WE RELATE THE PRICE TO VALUE: THE SOLE-SOURCE PYRAMID

Procurement Tier	Scope of Deliverables & Intellectual Property	Price & Vehicle Authority
TIER 1: COTS Mission Manual & Doctrine	Official 465-page technical training playbook (ASIN: B0HJ69KVHH) + dual-perimeter operational integration checklists and reference frameworks.	\$4,850 • COTS Fixed Price <i>FAR Part 13 Micro-Purchase (P-Card Instant Swipe)</i>
TIER 2: Operational Pilot & Testbed Harness	Pre-compiled local AHMVE client telemetry container + MCP-GATE proxy engine with baseline entropy calibration models for sandbox mission testing.	\$14,900 • Turnkey COTS <i>FAR 13.201 Micro-Purchase Ceiling (No RFP / Zero Competition)</i>
TIER 3: Enterprise / Prime Subcontract Integration	Full hardware root-of-trust integration (Intel SGX, AMD SEV, eBPF), custom Directed Acyclic Graph (DAG) state modeling, and classified node deployment.	\$350,000 – \$1,250,000 <i>Simplified Acquisition Threshold / Prime Teaming Subcontract</i>
TIER 4: Enterprise Sovereign Master Sole-Source	Exclusive agency-wide or combatant command deployment license, dedicated model parameter calibration, and perpetual joint operational rights.	Up to \$5,000,000 <i>FAR 19.1406 SDVOSB Sole-Source & FAR 6.302-1 Exclusivity</i>

WHY PRIMES & DOD CANNOT REFUSE THIS PARTNERSHIP

- **Direct Sole-Source Authority (\$5 Million SDVOSB Ceiling):** Under **FAR 19.1406**, contracting officers can award up to \$5,000,000 directly to Uply Media, Inc. on a sole-source basis with zero public competition, while satisfying federal socioeconomic mandates.
- **FAR 6.302-1 Exclusivity Shield:** Because Uply Media, Inc. holds the earliest recorded priority dates for this dual-perimeter architecture under 35 U.S.C. § 102, contracting officers have bulletproof Justification & Approval (J&A) documentation.
- **Zero Teaming Risk for Primes:** Prime defense contractors (Lockheed Martin, General Dynamics, Booz Allen Hamilton) integrate Uply Media's COTS solution into their multi-billion-dollar proposals to secure 100% small-business utilization credit and eliminate agent hijacking liabilities.

INITIATE IMMEDIATE PILOT OR SOLE-SOURCE ENGAGEMENT:
Entity: Uply Media, Inc. (SBA-Certified SDVOSB | CAGE: 9WMV4 | UEI: YPE4G8X18N67)
Leadership: Kyle Ransom, Chief Executive Officer (U.S. Navy Veteran)
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