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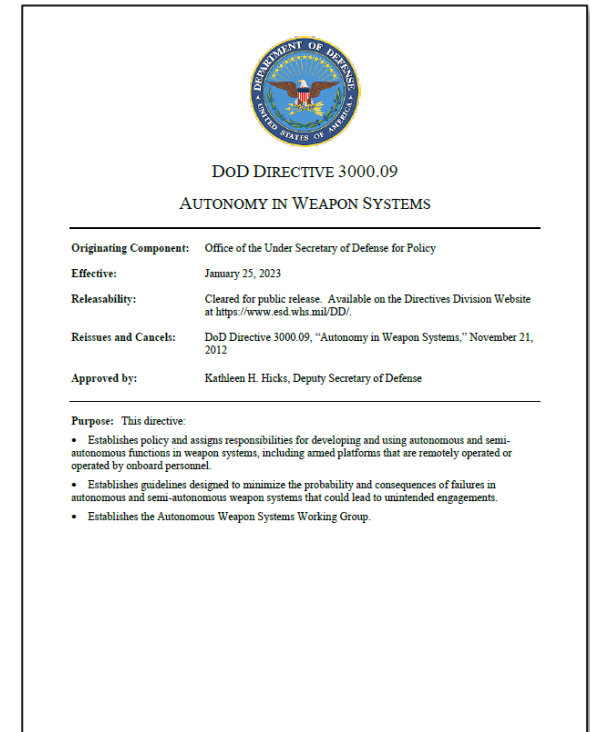
**Demonstrating Justified Confidence in Autonomous
Weapon Systems for DoD Directive 3000.09 Approvals**

SEP 2026

WHAT IS DODD 3000.09?



- Establishes policy and assigns responsibilities for developing and fielding autonomous and semiautonomous functions in weapon systems, including armed platforms that are remotely operated or operated by onboard personnel
- Establishes guidelines designed to minimize the probability and consequences of failures in autonomous and semi-autonomous weapon systems that could lead to unintended engagements
- Outlines requirement and process for a senior level review of a system prior to development and prior to fielding
- Does not prohibit development of autonomous weapon systems



DoD Directive 3000.09, Autonomy in Weapon Systems, is the only policy for autonomous weapon systems



DoDD 3000.09

WHAT IS DODD 3000.09?



- Autonomy in Weapon Systems: Applies to weapon systems with both autonomous and semiautonomous modes of operation
 - Autonomous Weapon System: A weapon system that, once activated, can select and engage targets without further intervention by an operator
 - Semi-Autonomous Weapon System: A weapon system that, once activated, is intended to only engage individual targets or specific target groups that have been selected by an operator.
- Body of evidence required by the review package is intended to
 - Ensure systems are employed with appropriate care and in accordance with the law of war, applicable treaties, weapon system safety rules, and rules of engagement
 - Build trust and confidence the system
 - Demonstrate mitigation of unintended engagements
 - Focus areas span various domains and engineering disciplines

APPROPRIATE HUMAN JUDGEMENT



System capabilities, human-machine interfaces, doctrine, TTPs, and training have been demonstrated to allow commanders and operators to exercise appropriate levels of human judgment over the use of force and to employ systems with appropriate care and in accordance with the law of war, applicable treaties, weapon system safety rules, and ROE that are applicable or reasonable expected to be applicable.

Demonstration Evidence

- System design features to enable operations in the intended environment that demonstrate a decrease unintended engagement and exercise appropriate levels of human judgement
- Define and describe the system's employment
 - Operators and training required
 - Any limitations to employment, such as environmental or graphical
 - Pertinent system capabilities
- Outline the method of employment
 - Any approvals ore restrictions

Potential Artifacts

- Documentation of planned operation/employment
- Operational Views
- Documentation for System Design
- Details on Human Interface & Design



SAFETY AND CYBER ASSURANCE



System safety, anti-tamper mechanisms, cyber survivability, operational resilience, and cybersecurity capabilities have been implemented in accordance with DoDI 5000.83, the Joint Capabilities Integration and Development System Manual, and DoDI 8500.01 to minimize the probability and consequences of failures. A monitoring regime is in place to identify and address changes in operational environment, data inputs, and use that could contribute to such failures.

Demonstration Evidence

- System design features and use to demonstrate mitigation of safety hazards
- System design features and use to highlight anti-tamper, cyber survivability, and resilience
- Status of assessments
 - Weapon safety reviews
 - Cyber assessments
 - System certifications
- Discuss the monitoring regime utilized to maintain awareness of system performance and operational alignment
 - May be technical or procedural solutions

Potential Artifacts

- Cyber protection plans and approvals
- Safety documentation and approvals
- Risk management artifacts



TESTING AND EVALUATION



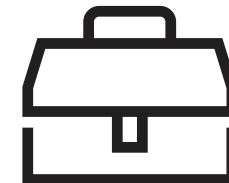
(a) Assess system performance, capability, reliability, effectiveness, and suitability under realistic conditions, including possible adversary actions, consistent with potential consequences of unintended engagement or unauthorized parties interfering with operation of the system.
(b) Have demonstrated that the system can be reprogrammed with sufficient rapidity to enable timely correction of any unintended system behaviors that may be observed or discovered during future system operations.

Demonstration Evidence

- Adherence to defined Measures of Effectiveness and Measures of Performance
- Defining the operational envelope
- Results of test and evaluation of system, to include adversarial actions and safety verifications
- Discuss the monitoring regime utilized to maintain awareness of system performance and operational alignment
 - May be technical or procedural solutions
 - Ensure regime is demonstrated to operational users

Potential Artifacts

- Test and Evaluation Plans and Results
- Documentation of System Design
- Reports from operational testing
- Documentation of reliability



TRAINING AND DOCTRINE



Adequate training, TTPs, and doctrine are available, periodically reviewed, and used by system operators and commanders to understand the functioning, capabilities, and limitations of the system's autonomy in realistic operational conditions.

Demonstration Evidence

- Training Plans
- Equipment/Parts/Tooling availability
- Discussion with users on approved CONOP/CONEMP
- Developed and promulgated Tactics, Techniques, and Procedures (TTPs)
- Doctrine revisions to integration capability
- Review timelines to ensure capability remains relevant and accurate

Potential Artifacts

- Training Plans
- Operator Engagements
- Operating Manuals
- Doctrine and Policy review and updates



HUMAN SYSTEM INTEGRATION



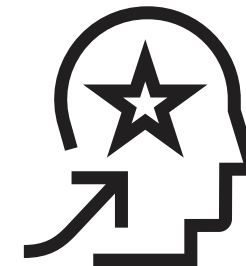
System design and human-machine interfaces are readily understandable to trained operators, provide transparent feedback on system status, and provide clear procedures for trained operators to activate and deactivate system functions.

Demonstration Evidence

- Identify the operator's role within the system execution process
- Clearly define the responsibility for decision by the operator(s) or system(s)
 - What can or cannot be affected during system operation
- Describe what input and output is available to operators
- Results of analysis/surveys on operator experience demonstrate interfaces are interpretable and informative

Potential Artifacts

- Documentation of System Design
- Assessment of Human Interfaces
- Analysis of any Human Machine Teaming
- Training Plans
- Operator Engagements



APPLICATION OF AI GUIDANCE



For systems incorporating AI capabilities, the deployment and use of the AI capabilities in the weapon system will be consistent with the DoD AI Ethical Principles and the DoD Responsible AI Strategy and Implementation Pathway.

Ethical Principle	AWS/DoDD 3000.09 Adherence	Source Artifacts
Responsible	AI-Enabled System (AIES) were developed and will be employed with appropriate levels of human judgement in its use and potential risks	Design Documentation Risk Register System Engineering Plan
Equitable	AI model pipeline and data assurance practices ensure model objectivity and minimize unintended bias	MLOps Documentation Data Cards/Analysis
Traceable	AIES functions and capabilities traced to user needs and operational concept	Architecture Operational Concept Needs/Requirement
Reliable	Explicit use cases were defined and safety, security, and effectiveness have been tested and assured	Test & Evaluation Plans Safety Artifacts Cyber Security Plan Use Cases
Governable	AIES design includes ability to detect and avoid unintended consequences and disengage or deactivate when unintended behavior is demonstrated	System Design Test & Evaluation Plans Safety Artifacts

LEGAL REVIEW



A legal review of the weapon system has been completed, in coordination with the GC DoD, and in accordance with DoDD 5000.01, DoDD 2311.01, and, where applicable, DoDD 3000.03E.

Demonstration Evidence

- Legal statements confirming that the system satisfies the law of armed conflict
 - Capable of being employed lawfully
 - Capable of being directed against a lawful target
 - Does not cause superfluous injury
 - Not prohibited by law or treaty

Source Artifacts

- General Counsel or Judge Advocate General legal review brief



CONCLUSION



- DoDD 3000.09 does not prohibit development or fielding of autonomous weapon systems
 - Employment decisions and judgement remains with Commanders
- Existing system engineering concepts, program management, and operator engagement provide significant evidence for DoDD 3000.09 adherence in the key areas identified in the Directive
 - Appropriate Human Judgement
 - Safety and Cyber Assurance
 - Testing and Evaluation
 - Training and Doctrine
 - Human System Integration
 - Application of AI Guidance
 - Legal Review



ETHICAL PRINCIPLES



Responsible.

DoD personnel will exercise appropriate levels of judgment and care, while remaining responsible for the development, deployment, and use of AI capabilities.

Equitable.

The DoD will take deliberate steps to minimize unintended bias in AI capabilities.

Traceable.

The DoD's AI capabilities will be developed and deployed such that relevant personnel possess an appropriate understanding of the technology, development processes, and operational methods applicable to AI capabilities, including with transparent and auditable methodologies, data sources, and design procedures and documentation.

Reliable.

The DoD's AI capabilities will have explicit, well-defined uses, and the safety, security, and effectiveness of such capabilities will be subject to testing and assurance within those defined uses across their entire life cycles.

Governable.

The DoD will design and engineer AI capabilities to fulfill their intended functions while possessing the ability to detect and avoid unintended consequences, and the ability to disengage or deactivate deployed systems that demonstrate unintended behavior.