MEMORANDUM FOR CHIEF MANAGEMENT OFFICER OF THE DEPARTMENT OF DEFENSE
SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
CHIEF, NATIONAL GUARD BUREAU
COMMANDERS OF THE COMBATANT COMMANDS
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR OF COST ASSESSMENT AND PROGRAM EVALUATION
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR OF OPERATIONAL TEST AND EVALUATION
CHIEF INFORMATION OFFICER OF THE DEPARTMENT OF DEFENSE
ASSISTANT SECRETARY OF DEFENSE FOR LEGISLATIVE AFFAIRS
ASSISTANT TO THE SECRETARY OF DEFENSE FOR PUBLIC AFFAIRS
DIRECTOR OF NET ASSESSMENT
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: (U//FOUO) Commercial Off-The-Shelf Unmanned Aircraft Systems Implementation Guidance

Reference: (a) (U//FOUO) Deputy Secretary of Defense Memorandum, “Unmanned Aerial Vehicle Systems Cybersecurity Vulnerabilities,” May 23, 2018
(b) (U//FOUO) Deputy Secretary of Defense Memorandum, “Commercial-Off-The-Shelf Unmanned Aerial Systems Implementation Guidance,” June 1, 2018

1. (U//FOUO) Purpose: To supersede my previous memo, dated June 1, 2018, regarding approval authority for procuring or operating Commercial Off-The-Shelf (COTS) Unmanned Aircraft Systems (UAS) and provide expanded delegation to the Services and Components for certain exception approvals for procuring or operating COTS UAS.

2. (U//FOUO) Authority:
   a. On May 23, 2018, the Deputy Secretary of Defense suspended the purchase and operational use of COTS UAS, due to cyber security vulnerabilities. The Deputy Secretary of Defense has delegated approval authority for all exemptions to the Under...
Secretary of Defense for Acquisition and Sustainment (USD(A&S)) and Department of Defense Chief Information Officer (DoD CIO).

b. (U//FOUO) Regardless of dollar value, Military Services and Component Authorizing Officials are delegated the authority to approve the procurement and use of COTS UAS, modified COTS UAS, and commercially available UAS or associated equipment as identified in Table 1. The Service/Component Authorizing Officials, co-defined as the Service/Component Acquisition Executive and the Service/Component Chief Information Officer, must each review every request on a case-by-case basis, track, and both certify that all mitigations have been employed.

c. (U//FOUO) The Military Services/Component Authorizing Official is limited to only approving the procurement and use of COTS UAS that meet the benign and controlled environment use cases when all of the mitigation requirements defined in the classified appendix are satisfied. Approval authority for any environments that do not meet all of the mitigation requirements require USD(A&S) and DoD CIO approval.

d. (U//FOUO) DoD Components that do not report to a Military Service Secretary or a DoD Component Head, or request a waiver relating to uncontrolled environments, require USD(A&S) and DoD CIO to approve procurement and use of COTS UAS, modified COTS UAS, and commercially available UAS exemptions.

e. The Military Services/Component Authorizing Officials are required to submit on the first of each month a list of all COTS UAS exemption waivers approved, in the COTS UAS database format, to USD(A&S) and DoD CIO.

3. (U//FOUO) Applicability: This issuance applies to the Office of the Secretary of Defense (OSD), the Military Departments (including the Coast Guard at all times, including when it is a Service in the Department of Homeland Security by agreement with that Department), the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the COCOMs, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within DoD (referred to collectively in this issuance as the "DoD Components") procuring or operating a COTS UAS, which includes:

a. (U//FOUO) Government-owned COTS UAS unless excepted under exception in section 6,

b. (U//FOUO) Contractor-owned COTS UAS operated by or in support of Government operations or testing, and

c. (U//FOUO) COTS UAS being operated on DoD installations.

4. (U//FOUO) COTS Definition:

a. (U//FOUO) All UAS systems that are sold in substantial quantity in the marketplace and are offered to the Government in the same form in which it is sold to non-government
consumers. The UAS systems are commercially available to the public including domestic and foreign manufacturers.

b. (U//FOUO) All UAS that in original form were commercially available, but have been modified with different hardware, software, or payloads.

c. (U//FOUO) All UAS ground command and control elements to include smart phone or tablet with associated software and hardware.

5. (U//FOUO) Environment Definitions

a. (U//FOUO) Benign Environment:

i. (U//FOUO) The event location is a public venue that will not expose any sensitive facilities, equipment, or activities before, during, or after the event.

ii. (U//FOUO) All information or data generated or collected during the event is approved and appropriate for public release. This would include video, pictures, signals, signatures, or any other event information.

iii. (U//FOUO) DoD facilities/bases, Defense Industrial Base (DIB) locations, or Defense Critical Infrastructure (DCI) are presumed to not be benign environments, but the Authorizing Officials can affirmatively certify that a particular DoD, DIB, DCI event location has been sanitized, meets all of the criteria of a benign environment, and that appropriate controls are implemented to keep all event activities within the approved boundary.


b. (U//FOUO) Controlled Environment:

i. (U//FOUO) DoD (or the entity executing the event) has physically restricted access to the location. The location of the event has appropriate stand-off such that data links (C2 and payload/sensor links) to and from the UAS and the Ground Control Station are contained within the controlled environment and cannot be detected or collected by an unauthorized sensor outside the controlled area.

ii. (U//FOUO) The environment must exclude open network access points (cellular, Wi-Fi, etc.).

iii. (U//FOUO) Indoor use cases where the environment is controlled as described are included in this category.

iv. (U//FOUO) Information regarding all facilities, equipment, personnel, and activities where the UAS is operating is not classified, but may be sensitive and may not be publicly releasable.
v. (U//FOUO) No classified information can be collected or observed.

c. (U//FOUO) Uncontrolled Environment:

i. (U//FOUO) All environments that carry the potential to expose troop location, tactical or strategic information, training, tactics and procedures, critical infrastructure, or sensitive equipment.

ii. (U//FOUO) Any environment where there is a risk to losing the platform in an adversary location.

iii. (U//FOUO) Any environment the Radio Frequency Spectrum is unknown or cannot be controlled and there is risk of exposure of strategic, tactical, sensitive, or non-public information.

iv. Anything not defined in benign or controlled environments.

6. (U//FOUO) Exceptions: The following UAS systems are not covered by this implementation guidance and do not require submission of an exemption request:

a. (U//FOUO) That is managed by a formal program of record under a Service-level program office; and

b. (U//FOUO) Has an authority to operate, in accordance with DoD Instruction (DoDI) 8510.01, and a cyber vulnerability assessment.

7. (U//FOUO) Exemptions: All procurements and use requests for exemptions require prior approval and will be considered on a case-by-case basis for the following activities:

a. (U//FOUO) Critical operations with no alternative solution,

b. (U//FOUO) Counter-UAS surrogate testing and training, or

c. (U//FOUO) Intelligence and Information warfare testing, analysis, and training.

d. (U//FOUO) Research and Development

e. (U//FOUO) Demonstrations

8. (U//FOUO) USD(A&S) and DoD CIO Exemption Process: The exemption for procurement and use of COTS UAS or associated equipment (regardless of dollar value) requires USD(A&S) and DoD CIO approval based on Table 1. The Services/Components shall follow the same procedures within their authorities, to the maximum extent practical. The exemption approval process is as follows:

a. (U//FOUO) All exemption requests shall be handled by a single Service, COCOM, or Agency Point of Contact (POC).
b. (U//FOUO) The Service, COCOM, or Agency POC will obtain written endorsement from the Component Head, that includes a clear impact statement, rationale, technical information, and technical POC that should be addressed to the USD(A&S) and DoD CIO.

c. (U//FOUO) USD(A&S) and DoD CIO will evaluate the exemption request and render a decision.

9. (U//FOUO) Technical Information Required:

a. (U//FOUO) For unmodified COTS UAS using factory firmware, datalinks, and RC controllers, provide:
   i. UAS make, UAS model, ground control station and software, payload make, payload model, software name, and version number.

b. (U//FOUO) For modified COTS UAS, provide:
   i. Name of system, model, hardware configuration, software configuration, network connections, data links, autopilots, network connectivity, network architecture diagram, ground controller, ground control software, payloads, payload data networks, and air-worthiness certification.

c. (U//FOUO) Location of use, time of use, airspace, operator, certificate of authorization, and cybersecurity risk assessment.

d. (U//FOUO) Mitigation solutions to include hardware and software, Cyber Security vulnerability verification and validation, and results of a risk management decision by an authorizing official if one exists. Mitigation solutions should be in compliance with applicable DoD UAS cybersecurity policy, such as DoDI 8500.01, "Risk Management Framework," and DoDI S-4660.01, "Encryption of Imagery Transmitted by Airborne Systems and Unmanned Aircraft Control Communications."

10. (U//FOUO) Clarification. This Directive includes all:

a. (U//FOUO) Government-owned COTS UAS unless excepted under paragraph 6 above.

b. (U//FOUO) Contractor-owned COTS UAS operated by or in support of Government operations or testing.

c. (U//FOUO) COTS UAS being operated on DoD installations.
(U//FOUO) The technical point of contact for this implementation guidance is Mr. Brent Ingraham, Office of the Under Secretary of Defense for Acquisition and Sustainment, Platform and Weapons Portfolio Management, at 703-693-9141 or brent.g.ingraham.civ@mail.mil.

Attachment:
1. Table 1 - DoD Procurement and Use of COTS UAS Authorities Matrix
Table 1 – DoD Procurement and Use of COTS UAS Authorities Matrix

<table>
<thead>
<tr>
<th>UAS Operations Environment</th>
<th>UAS Operations</th>
<th>Mitigations</th>
<th>Approval Authority</th>
<th>Further Delegation</th>
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<tbody>
<tr>
<td>Benign Environment</td>
<td>Research &amp; Development</td>
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<td>Service/Component Acquisition Executive and Service/Component Chief Information Officer</td>
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<tr>
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<td>Training</td>
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<td>Demonstration</td>
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<td>Service/Component Acquisition Executive and Service/Component Chief Information Officer</td>
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<td>Controlled Environment</td>
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<td>Training</td>
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<td>Controlled Environment</td>
<td>Demonstration</td>
<td>See Classified Annex¹</td>
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</tbody>
</table>

¹ (U//FOUO) Classified Annex Link: [https://go.sgov.gov/lVUIATg](https://go.sgov.gov/lVUIATg)