



Countering Unmanned Systems - A DoD Perspective -

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DoD Adoption of Unmanned Systems



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Imitation of DoD Adoption





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DoD Response

Air Force wants a portable system to counter small drones

US Army contracts SRC to develop and field a new counter-UAV system

DARPA issues RFI for protection against small unmanned air systems

Army Advances Counter-UAS Strategy

Air Force Buys Mysterious Israeli Weapon to Kill ISIS Drones

Counter-Drone Exercise Black Dart Expands, Moves To Eglin AFB



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Areas of Concern

- **United States Territories**
 - Governed by existing laws
 - Exemptions provided by Congress
 - Potential interference with commerce and hobbyists
- **Overseas Bases**
 - Governed by host nation laws
 - Embedded in host nation facilities
 - Responsibility for force protection
- **Title 10 Operations**
 - More liberal operating environments
 - Interoperability with other equipment
 - Sharing with partners



Congressional Action (1 of 3)

NDAF Fiscal Year 2017 (Sec. 1697, Public Law 114-328) and Section 130i of Title 10, United States Code:

Protection of certain facilities and assets from unmanned aircraft

(a) Authority.—Notwithstanding any provision of title 18, the Secretary of Defense may take, and may authorize the armed forces to take, such actions described in subsection (b)(1) that are necessary to mitigate the threat (as defined by the Secretary of Defense, in consultation with the Secretary of Transportation) that an unmanned aircraft system or unmanned aircraft poses to the safety or security of a covered facility or asset.

(b) Actions Described.

(1) The actions described in this paragraph are the following:

(A) Detect, identify, monitor, and track the unmanned aircraft system or unmanned aircraft, without prior consent, including by means of intercept or other access of a wire, oral, or electronic communication used to control the unmanned aircraft system or unmanned aircraft.



Congressional Action (2 of 3)

(B) Warn the operator of the unmanned aircraft system or unmanned aircraft, including by passive or active, and direct or indirect physical, electronic, radio, and electromagnetic means.

(C) Disrupt control of the unmanned aircraft system or unmanned aircraft, without prior consent, including by disabling the unmanned aircraft system or unmanned aircraft by intercepting, interfering, or causing interference with wire, oral, electronic, or radio communications used to control the unmanned aircraft system or unmanned aircraft.

(D) Seize or exercise control of the unmanned aircraft system or unmanned aircraft.

(E) Seize or otherwise confiscate the unmanned aircraft system or unmanned aircraft.

(F) Use reasonable force to disable, damage, or destroy the unmanned aircraft system or unmanned aircraft.

(2) The Secretary of Defense shall develop the actions described in paragraph (1) in coordination with the Secretary of Transportation.



Congressional Action (3 of 3)

(c) Forfeiture.—Any unmanned aircraft system or unmanned aircraft described in subsection (a) that is seized by the Secretary of Defense is subject to forfeiture to the United States.

(d) Regulations.—The Secretary of Defense and the Secretary of Transportation may prescribe regulations and shall issue guidance in the respective areas of each Secretary to carry out this section.



UAS in the National Airspace (1 of 3)

- **UAS in the National Airspace is new, so we need to ensure that we respect the goals of commerce while balancing the need for a secure airspace in the homeland**
- **What characteristics would we define as a responsible use of airspace?**
 - A system that allows the identification and tracking (e.g., IFF* of UAS in the airspace)...an unambiguous air picture
 - An enhanced, supporting infrastructure to allow safe flight over people
 - No flights over bases



UAS in the National Airspace (2 of 3)

- **A buffer outside base fence lines would be best for all involved**
 - Short response times can result in destruction of property
- **Tracking accounts for commercial UAS, Government UAS, as well as hobbyist UAS**
- **A complete air picture with both commercial (rule 107) and hobbyists to ensure safe transit of UAS**
- **Traffic lanes to ensure no collateral damage**
- **Retrofitting:**
 - The “current fleet” of UAS should be retrofit for safe flight over people



UAS in the National Airspace (3 of 3)

- **Retrofitting will enable UAS to be a part of the larger tracking and identification infrastructure**
- **Like flights over people, a beyond-line-of-sight flight is complemented by:**
 - Improved infrastructure for enhanced monitoring and tracking of UAS
 - Independent testing validation/proof to ensure ability to recover a UAS should an incident of failure or loss of flight controls and navigation occur



Questions?