



DHS SCIENCE AND TECHNOLOGY

Air Domain Awareness

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**Homeland
Security**

Science and Technology

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Air Domain Awareness

- Air Domain Awareness is understanding everything that is in the air around you
 - Includes all manned and unmanned aircraft
 - Includes the detection, tracking and identification of aircraft
 - Does not include mitigation



Authorization

- After years of close coordination, the Federal Aviation Administration (FAA) and Departments of Defense, Energy, Justice, and Homeland Security (DOD, DOE, DOJ, and DHS) obtained congressional relief in order to test, operate, and evaluate systems that detect and mitigate unmanned aircraft systems (UAS) in the United States.
- The National Defense Authorization Acts of 2017 and 2018 granted the DOD and DOE counter-UAS (C-UAS) authorities
- in 2018 the FAA Reauthorization Act provided DHS and DOJ with their authorities. FAA also received authority in the FAA Reauthorization Act of 2018 to employ C-UAS, for test and evaluation.
- The Act became Pub. L. 115-254 and amends Titles 46 (Domestic Security), 14 (United States Coast Guard), and 49 (Transportation) Preventing Emerging Threats Act of 2018 (“the Act”) authorizing the DHS and DOJ to engage in certain C-UAS activities, notwithstanding provisions of Title 18 and Title 49 that prohibit the interception of communications and interference with aircraft.
 - The Act authorizes DHS and DOJ to conduct C-UAS activities against unmanned aircraft systems (UAS) that poses a credible threat to the safety or security of a “covered facility or asset,” as defined by the Act.

How DHS is Addressing the Nefarious UAS Issue

- DHS has established two programs to address nefarious aircraft
 - Counter Unmanned Aircraft Systems (CUAS)
 - Air Domain Awareness of Manned and Unmanned Aircraft
- Counter Unmanned Aircraft Systems
 - Addressing the new authorization to provide technology to protect cover assets from nefarious UAS
 - Supporting existing DHS programs that address CUAS before the reauthorization of FAA
- Air Domain Awareness of Manned and Unmanned Aircraft
 - Supporting Unmanned Aircraft Traffic Management (UTM) System
 - Teaming Air Domain Awareness program



Air Domain Awareness

- DHS is teaming with FAA and DOD to evaluate air domain awareness and counter UAS systems in real world situations
 - Counter UAS systems have been used in conflicts overseas, but real use has been limited within the United States
 - Full air domain awareness and counter UAS systems testing and evaluation has been in locations like White Sands Missile Range that do not represent most real world environments
- A joint Request for Information (RFI) for Air Domain Awareness and Protection will be issues via FedBizOps
 - Evaluation locations will include; urban, maritime, airport, mountainous and plains regions
 - Down selected companies will be invited to a one day/night event to verify the system
 - Systems that show exceptional capabilities will be invited to participate in up to a six month evaluation
 - Federal only evaluation reports will be developed to help with future procurement of air domain awareness and covered assets projects

Unmanned Aircraft Traffic Management (UTM) System

- UTM is an “air traffic management” ecosystem for small UAS in low altitude airspace
- Teaming to develop a joint Federal UAS Service Supplier (USS)
- DHS Enabling UAS
 - Enhance situational awareness of the land border between Ports-of-Entry
 - Enhance the ability to share, query, and analyze law enforcement information/data to enable law enforcement investigations
 - Enhance the safety and effectiveness of DHS component officers/agents by providing them improved tools
- DHS Air Domain Awareness
 - Improve the detection and tracking of low altitude airborne threats
 - Enhance the capability to integrate disparate border security sensor and intelligence sources, perform data analytics, and share the resulting actionable intelligence with HSE partners





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