



DEPUTY SECRETARY OF DEFENSE  
1010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1010

APR 26 2017

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Establishment of an Algorithmic Warfare Cross-Functional Team (Project Maven)

As numerous studies have made clear, the Department of Defense (*DoD*) must integrate artificial intelligence and machine learning more effectively across operations to maintain advantages over increasingly capable adversaries and competitors. Although we have taken tentative steps to explore the potential of artificial intelligence, big data, and deep learning, I remain convinced that we need to do much more, and move much faster, across *DoD* to take advantage of recent and future advances in these critical areas.

Accordingly, I am establishing the Algorithmic Warfare Cross-Functional Team (AWCFT) to accelerate *DoD*'s integration of big data and machine learning. The AWCFT's objective is to turn the enormous volume of data available to *DoD* into actionable intelligence and insights at speed.

The AWCFT's first task is to field technology to augment or automate Processing, Exploitation, and Dissemination (PED) for tactical Unmanned Aerial System (UAS) and Mid-Altitude Full-Motion Video (FMV) in support of the Defeat-ISIS campaign. This will help to reduce the human factors burden of FMV analysis, increase actionable intelligence, and enhance military decision-making. AWCFT will: 1) organize a data-labeling effort, and develop, acquire, and/or modify algorithms to accomplish key tasks; 2) identify required computational resources and identify a path to fielding that infrastructure; and 3) integrate algorithmic-based technology with Programs of Record in 90-day sprints.

The AWCFT will initially provide computer vision algorithms for object detection, classification, and alerts for FMV PED. Further sprints will incorporate more advanced computer vision technology. After successful sprints in support of Intelligence, Surveillance, Reconnaissance (ISR) PED, the AWCFT will prioritize the integration of similar technologies into other defense intelligence mission areas.

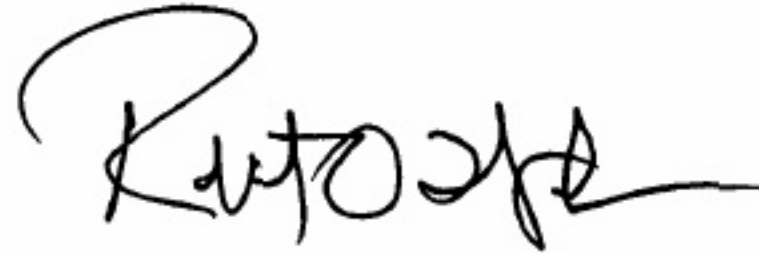
AWCFT will also consolidate existing algorithm-based technology initiatives related to mission areas of the Defense Intelligence Enterprise, including all initiatives that develop, employ, or field artificial intelligence, automation, machine learning, deep learning, and computer vision algorithms.

The Under Secretary of Defense for Intelligence (USD(I)) will oversee the AWCFT. The USD(I)'s Director for Defense Intelligence (Warfighter Support) will serve as the Director. An executive steering group comprising senior representatives from USD(I), the Joint Staff, the Military Services, the Office of the DoD General Counsel, and other DoD components as approved by USD(I) will provide oversight. The AWCFT will be supported by a Project Office



within USD(I) and by an O-6 Working Group from across multiple DoD and intelligence community components.

The AWCFT will report directly to me and provide monthly updates, with the first update due no later than May 1, 2017. The guidance within this memorandum will be converted to a Directive-Type Memorandum, signed by the Deputy Secretary of Defense, within three months.

A handwritten signature in black ink, appearing to read "Robert M. Roth". The signature is fluid and cursive, with a large initial "R" and a horizontal line extending to the right.