



# EW EUROPE 2019 - STOCKHOLM

CYBER/EW CONVERGENCE: FACT OR FICTION?

WAYNE L. SHAW III, PAST PRESIDENT, ASSOCIATION OF OLD  
CROWS

LEAD ASSOCIATE, BOOZ | ALLEN | HAMILTON

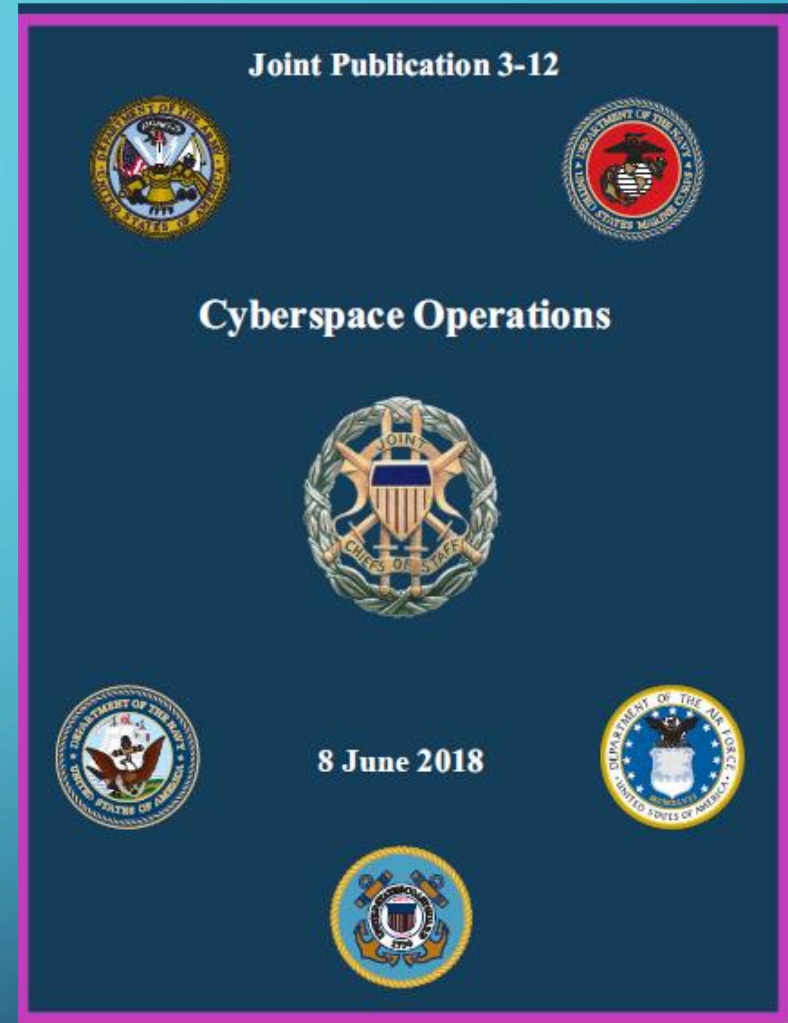
# ANALYSIS THROUGH LENS OF DOTMLPF-P

- Doctrine
- Organization
- Training
- Materiel
- Leadership
- Personnel
- Facilities
- Policy

U.S. Department of Defense (DoD) Joint Publication 1-02

# U.S. DOD DOCTRINE - CYBER

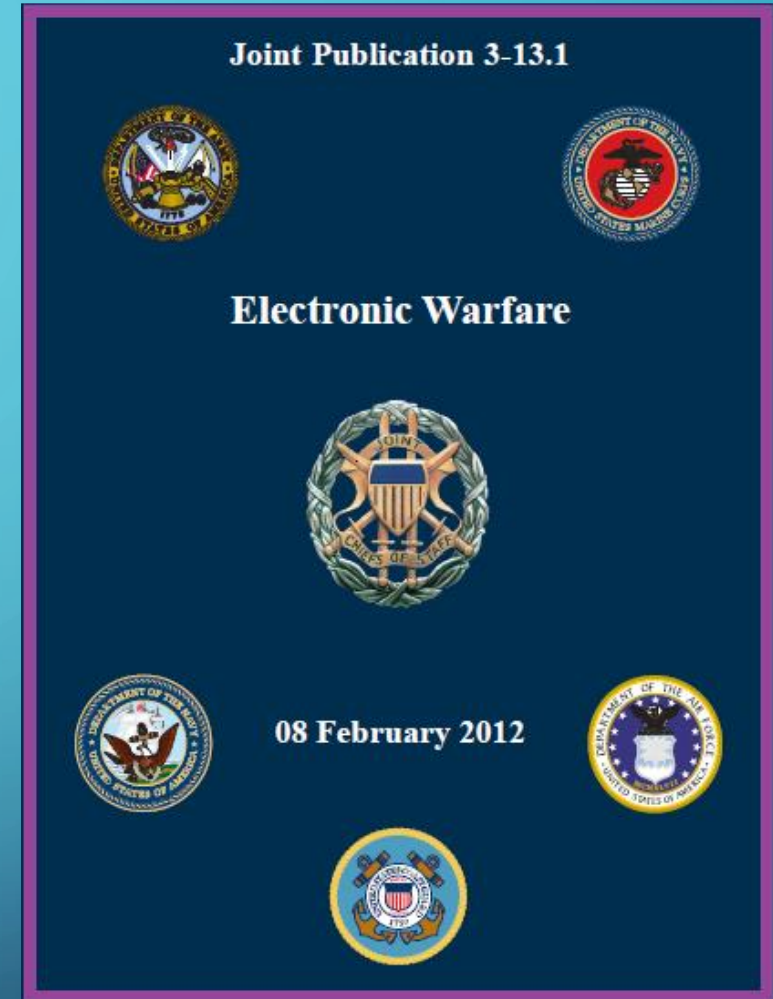
- U.S. DoD Cyber Doctrine  
Joint Publication 3-12



# U.S. DOD DOCTRINE - EW

- U.S. DoD EW Doctrine

Joint Publication 3-13.1



# U.S. DOD ORGANIZATION - CYBER



# U.S. DOD ORGANIZATION – EW



- U.S. Army
- U.S. Navy

- U.S. Air Force
- U.S. Marine Corps



# U.S. DOD TRAINING - CYBER

- U.S. Army



- U.S. Air Force



- U.S. Navy



- U.S. Marine Corps



Initial training at Corri Station in Pensacola, FL;  
Keesler AFB, MS for many specialties, all branches



# U.S. DOD TRAINING - EW

• U.S. Army



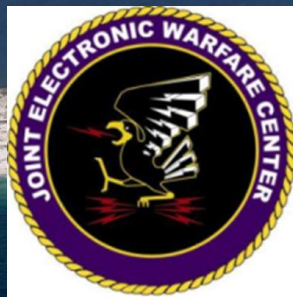
• U.S. Air Force



• U.S. Marine Corps



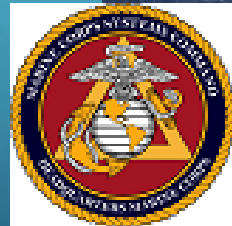
• U.S. Navy



Joint EW Theater Operations Course



# U.S. DOD MATERIEL - CYBER



- U.S. Army
- U.S. Navy
- U.S. Air Force
- U.S. Marine Corps



Unified Platform

# U.S. DOD MATERIEL - EW

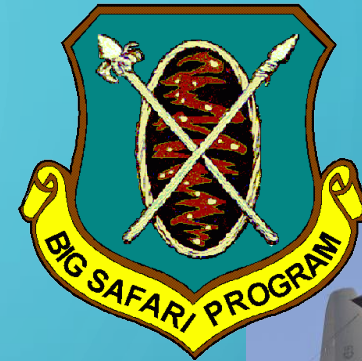
- U.S. Army



- U.S. Navy



U.S. Air Force



U.S. Marine Corps



# U.S. DOD LEADERSHIP (& EDUCATION) - CYBER



- U.S. Army



- U.S. Air Force



- U.S. Navy



- U.S. Marine Corps



# U.S. DOD LEADERSHIP (& EDUCATION) - EW



- U.S. Army



- U.S. Navy



- U.S. Air Force



- U.S. Marine Corps



# U.S. DOD PERSONNEL - CYBER



- U.S. Army – MOS 17C (Cyber Ops Sp)
  - Direct Commissioning program for Army Cyber Officers (<41)
- U.S. Navy: Os - Cyber Warfare Engineering; Es – multiple rates
- U.S. Air Force – AFSCs, Officers, 17Ds; Enlisted, 1B4s
- U.S. Marine Corps: Os & Es - cyberspace 1700 occupational field

## U.S. DOD PERSONNEL - EW

- U.S. Army -- MOS, 17E;
- U.S. Navy – NFOs -> ECMOs
- U.S. Air Force -- Combat Systems Officers, 12XXX
- U.S. Marine Corps – NFOs -> ECMOs





## U.S DOD FACILITIES - CYBER

- **U.S. Army – Ft. Gordon, GA**
- **U.S. Navy – Ft. Meade, MD**
- **U.S. Air Force – San Antonio, TX**
- **U.S. Marine Corps – Ft. Meade, MD**

## U.S. DOD FACILITIES - EW

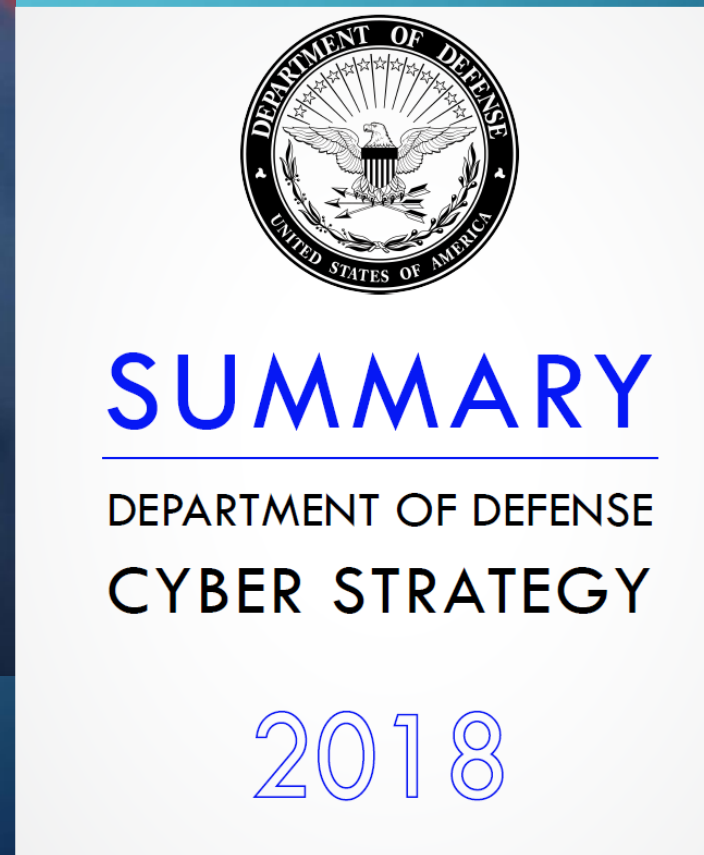
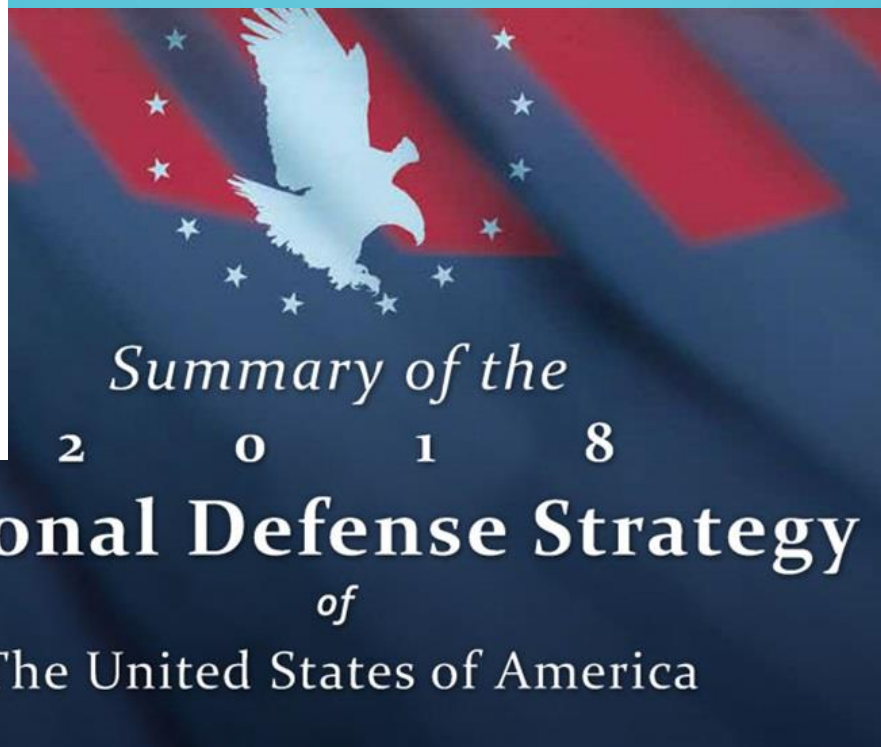
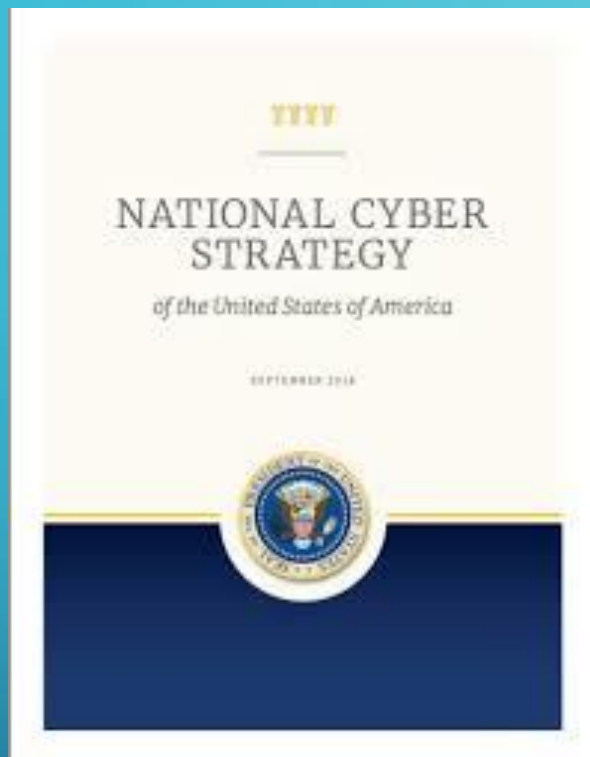
- **U.S. Army**
- **U.S. Navy**
- **U.S. Air Force**
- **U.S. Marine Corps**



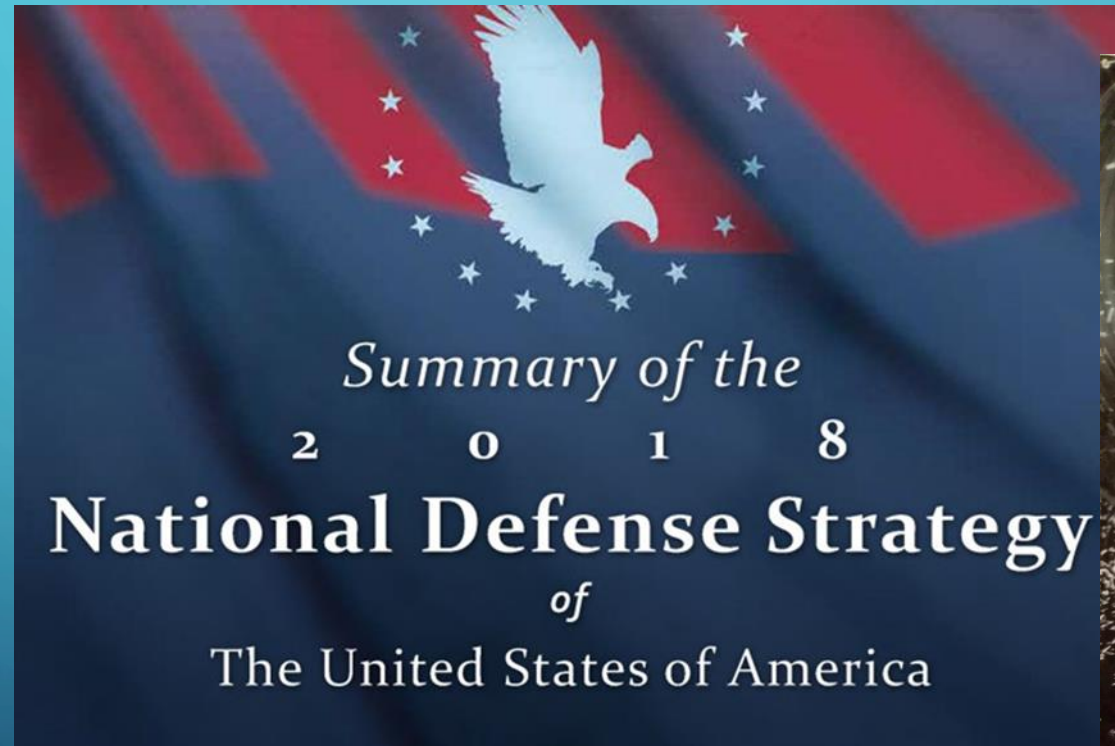
NAS Whidbey Island – Home of the EA-18G, EP-3 and P-8



# U.S. DOD POLICY - CYBER



# U.S. DOD POLICY - EW



# WHAT I DID ***NOT*** TALK ABOUT

- Funding for Cyber vs. EW
  - EX: Program Elements (PEs) for AF Cyber distinct from EW
    - AF Cyber POM worked in my office at 24<sup>th</sup> AF
- Command and Control (C2) of Cyber vs. EW
- OSD segregation of Cyber and EW leadership
  - Ex: Dr. Bill Conley, Director of EW vs. Richard Linderman  
Deputy Director, Information Systems and Cyber Security

# TAKE-AWAYS

- From DOTMLPF-P lens, Cyber and EW are *not* converged