

At a Glance

What is it?

■ Distributed Electronic Warfare (EW) is the concept of coordinating multiple EW assets distributed across the battlespace.

How does it work?

■ Distributed EW will control the electromagnetic (EM) spectrum over wide geographical areas, optimally utilizing all available off-board and on-board EW assets to provide synchronized and networked EW sensing and attack.

What will it accomplish?

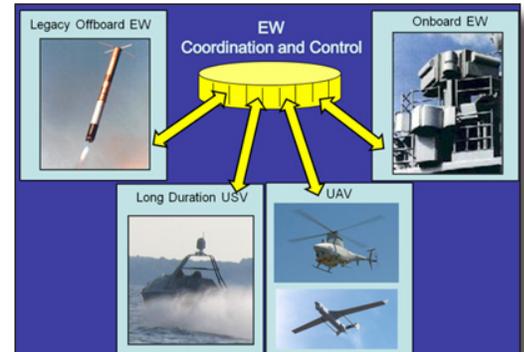
■ Increased capacity and capability in order to generate essential EW effects required to counter emerging threat system developments and employment concepts

■ Enable rapid insertion of advanced technology to improve EW effectiveness against future threats

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Current platform-centric EW systems are limited in their ability to generate essential EW effects required to counter emerging threat system developments and employ advanced EW concepts. Proprietary and closed system designs limit rapid innovative technology insertion and hamper the ability to match or out-pace emerging threat developments. The vision for distributed EW is a network-enabled, coordinated and spatially distributed EW system-of-systems to counter emerging asymmetric threat capabilities by providing time-critical situational awareness (SA) of adversary dispositions and activity, denial of the enemy's SA of friendly force dispositions and activity, and camouflage and deception to dilute enemy engagement capacity.



Distributed EW will provide the following objective capabilities:

Wide area, real-time location determination of adversary emitters; automated recognition of threat emitter operating modes; adaptive electronic attack response to threat emitters; wide area camouflaging to deny target detection or cause misclassification of targets; wide area deception through synchronized decoy control; denial or corruption of enemy sensing capabilities by synthetic generation of high density clutter environments; seamless operability and graceful degradation of network-enabled functions in dense EM environments; and simplified scalability and ability to upgrade through modular and open systems architecture design.

Research Challenges and Opportunities:

- Control and optimization technologies that allow coordination of all available EW systems over a large area
- System technologies that provide low-cost scalable spectrum coverage, advanced processing and threat handling capacity
- Passive countermeasure approaches that provide wide bandwidth frequency responses that include distributed reflector constellations, obscurants and multi-spectral decoys