

Distributed Electronic Warfare

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Purpose

MAGTF EW

- Provide current overview of Marine Corps Electronic Warfare:
 - ❑ EW Centric Platform Strategy
 - ❑ Platform Agnostic Strategy
 - ❑ MAGTF (air, land, sea, cyberspace) Spectrum Operations Graphic
 - ❑ Intrepid Tiger II
 - ❑ Intrepid Tiger II Payload Strategy
 - ❑ Software Reprogrammable Payload (SRP)
 - ❑ F-35
 - ❑ MUX UAS
 - ❑ Wrap Up

VMAQ Status

MAGTF EW

Recent Past / Near Future

- VMAQ-4 final deployment completed Oct 2016
- VMAQ-3 final deployment currently underway
- Final EA-6B deployment:
 - VMAQ-2 (FY18)
- Takeaway:
 - In three months there will only be one operational EA-6B squadron remaining; in 15 months there will be no operational EA-6B squadrons for tasking.



Sundown

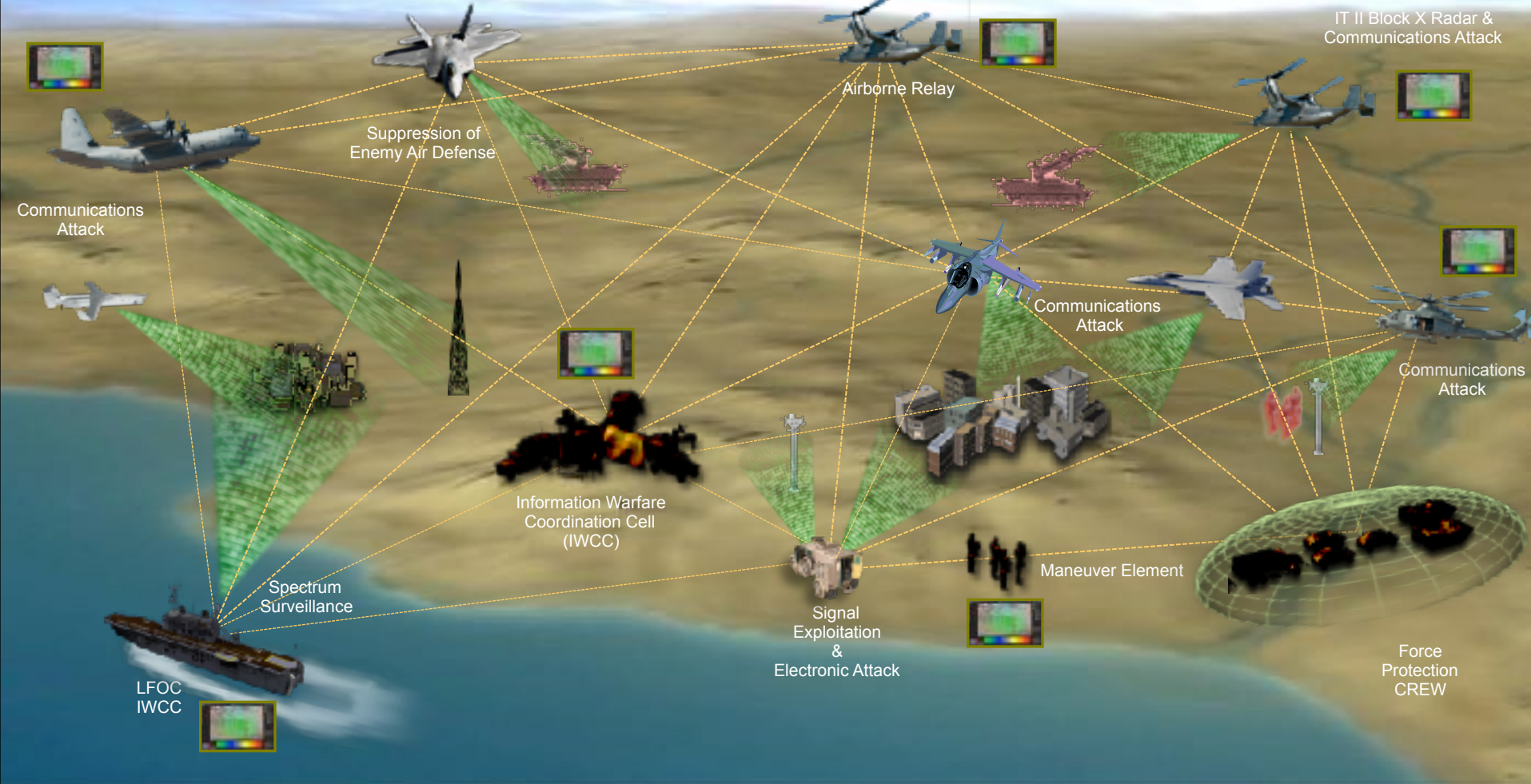
- EA-6B sundown began FY16
 - VMAQT-1 (Deactivated 27 May 2016)
 - VMAQ-4: FY17 (Deactivated 30 June 2017)
 - VMAQ-3: FY18 (Begin deactivation 1 Oct 2017)
 - VMAQ-2: FY19
- Transition opportunities for EA-6B personnel
 - (38) aircrew selected for transition / conversion / UAS accession (FY11-FY17)
 - Ongoing transition board opportunities in FY18 and for foreseeable future

The Joint Tactical AEA Requirement

- The Joint TacAir AEA mission FY19+ Navy EA-18G only
 - Capacity
 - EA-6B POR: 128, EA-18G POR: 160
 - Capability
 - EA-6B and EA-18G both use ALQ-218 receivers and ALQ-99 EA pods
 - Next Gen Jammer will replace ALQ-99 for EA-18G over time
- Marine Aviation has fielded and will continue to develop AEA capabilities that are organic to the MAGTF.
 - F-35
 - Intrepid Tiger II (IT II)
 - Future: MAGTF Expeditionary UAS (MUX)

MAGTF Spectrum Operations

Operational Concept Graphic



“MAGTF EW transitions the Marine Corps from a focus on low density/high-demand EW platforms, to a distributed, platform-agnostic strategy – where every platform contributes/ functions as a sensor, shooter and sharer – to include EW.

Under MAGTF EW the Marine Corps is leveraging emerging technologies and integrating multiple platforms, payloads, nodes, and capabilities to provide commanders with an organic and persistent air and ground EW capability.”

Intrepid Tiger II

MAGTF EW

Intrepid Tiger II (V)1

- Electronic Warfare pod providing organic Communications Electronic Attack (EA) for the MAGTF
- Platform agnostic, non-propriety, utilizes existing platform interfaces (no OFP changes)
- Fielded on AV-8B, F/A-18A-D
- (20+) completed deployments
- Continuous MEU deployments
 - 305 pounds, 141" x 10"



Intrepid Tiger II (V)3

- Increased frequency range and added direction finding (DF) capability
- Fielding on UH-1Y (Future: AH-1Z)
 - AH-1Z integration and test in FY21-24 (POM-20 request)
- Initial MEU deployment FY16, second MEU deployment complete, third deployment begins 4QFY17.
- UH-1Y IOT&E 1Q-2QFY18
 - 283 pounds, 108" x 8"



Intrepid Tiger II (Cont.)

MAGTF EW

Intrepid Tiger II (V)"4"

- Payload under IT II family of systems for RQ-21A
- EW payload capable of conducting, supporting, and coordinating Communications Electronic Attack and Electronic Warfare Support.
 - IT II (V)"4" nomenclature pre-decisional (CPD in draft)
 - Payload production FY21-23



Intrepid Tiger II Block X

- Block X ECP for (V)1 develops Counter-Radar EA
 - Funded: MV-22B, AV-8B, F/A-18A-D
- Priority Block X Platform: MV-22B, payload production FY20-23
- Block X form factor will be designed as both a pod and as a payload
 - Pod: AV-8B, F/A-18A-D
 - Payload: MV-22B

USMC F-35

MAGTF EW

- **420 aircraft**
 - **353 Bs**
 - **67 Cs**
- **20 front line squadrons**
- **50 year jet at the beginning of its life**

MUX UAS

MAGTF EW

- Sea base-able
- Multi-sensor
- EW
- C4 bridge
- AAW
- OAS
- Resupply

The Reason Why...

MAGTF EW

“The true role of infantry was not to extend itself upon heroic physical effort, not to wither away under merciless machine gun fire, not to impale itself upon hostile bayonets, but on the contrary, to advance under the maximum possible array of mechanical resources, in the form of guns, ...tanks, mortars and aircraft; to advance with as little impediment as possible; to be relieved as far as possible of the obligation to fight their way forward.”