

Commanding Operations in the Information Environment

A gateway to composite warfare and joint all-domain operations
by LCDR Jessica Reed

The Marine Corps is at an inflection point to meet the demands of an operating environment that multiple Marine Corps generals have recognized as being characterized by complex terrain, technology proliferation, and information warfare. The April 2020 *Marine Corps Gazette*, entirely dedicated to information-related topics, reflected the Marine Corps’ appetite for understanding and dominating Operations in the Information Environment (OIE). Malign activity from the multi-dimensional information threat axis is formidable and persistent, so OIE will be essential to the Marine Corps’ competitive advantages in current and future operations. For Marines to maintain their revered reputation as the Nation’s expeditionary force-in-readiness, they must holistically embrace OIE and adopt broader and more flexible perspectives on their roles in global operations across the Competition Continuum. In doing so, the Marine Corps will advance on its trajectory to integrate into fleet composite warfare and, thusly, into the developmental concept of Joint All-Domain Operations.

The information environment is the complex terrain that characterizes the global operating area, which operating forces constantly struggle to regard holistically. Terrain is no longer just a physical construct. This is evident in

>LCDR Reed is a Navy Intelligence Officer. She began her career as a Surface Warfare Officer onboard USS Essex (LHD-2). She was also a Fire Control Officer onboard USS Pinckney (DDG-91) and an Assistant Intelligence Officer onboard USS John C. Stennis (CVN-74). She is a 2020 graduate of the Marine Corps University Command and Staff College and currently serves at the Defense Intelligence Agency.

The Marine Air Ground Task Force (MAGTF) Information Environment Operations Concept of Employment, which defines the information environment as all-encompassing of the physical, informational, and cognitive dimensions.¹ Marines must gain the same maneuvering agility across informational and cognitive terrain that they have historically demonstrated across physical terrain.

Along the same logic, the Marine Corps has it right in replacing “warfare” with “operating environment” in its lexicon and thinking. This is complementary to the transition of

the Multi-Domain Battle concept to Multi-Domain Operations (MDO).² Furthermore, the logic aligns to joint force trends triggered by the 2018 *National Defense Strategy* to regard military operations in a fluid state across the Competition Continuum defined in JDN 1-19 (see Figure 1) rather than contriving linear, phased approaches. The Marine Corps should continue to build on its momentum towards setting expectations of MAGTFs to remain persistently engaged in various degrees of cooperation and conflict simultaneously. For military armed forces, combat or “warfare” readiness must obviously



Figure 1.

remain the utmost priority, but individual service force designs must also support the reality that if operating effectively, little of what U.S. armed forces do will actually be combat. Setting conditions to avert war is a persistent fight that requires the Marine Corps expeditionary ethos in all forms of global competition—not just combat. In this “information era,” information specialists may have mindsets uniquely suited for fluid operations that will be first-to-the-fight across the Competition Continuum.

Absent any official categorical distinction, one may assume that Marine Corps information specialists are individuals who fall under the Deputy Commandant for Information’s organizational hierarchy. These individuals have unique credibility and experience with multi-dimensional principles because they, arguably equal in comparison to logistics operators but more-so than air and ground operators, often have more experience operating across multiple domains and are mobile across diverse unit types and missions.³ Unless (or until) the Marine Corps establishes an Information Occupational Field, as suggested by the Marine Corps Information Operations Center commander,⁴ Marine Information Group (MIG) specialists informally have the lead in federating OIE principles across the MAGTF. Unfortunately, MAGTF buy-in to OIE principles is stifled by institutionally subordinating cadres of information specialists to traditional MAGTF elements. To facilitate wider buy-in to these principles, MIGs require legitimacy equivalent to MAGTF Major Subordinate Command (MSC) elements.

5th MAGTF Element: Information Combat Element

Already “MSC-like”⁵ commands, elevating MIGs to unequivocal MSC status is not without precedence. In 2006, the Deputy Commandant for Installations & Logistics renamed the Combat Service Support Element the Logistics Combat Element for “consistency” and to reflect the Marine Corps’ “combat nature.”⁶ Information’s designation as a function by the Joint Staff in 2017

and then a warfighting function by the Marine Corps in 2019 validated it too as combat power, in contrast to being merely service support.⁷ It is befitting for the Marine Corps to bring information to the forefront of operations alongside ground, air, and logistics by distinguishing its body of specialists, Information Occupational Field, or otherwise as a 5th MAGTF element. OIE specialists are too critical to be relegated to discontinuous career paths that treat their information-related skillsets as secondary Military Occupational Specialties pursued as nice-to-haves to nourish intellectual curiosity, accumulate credentials, and enrich professional military education. While promoting optional development of information-related skills in this way is perhaps in the spirit of the new *MCDP 7, Learning*, it is most certainly not in the intent. Instead, it is easily arguable that the skillsets associated with the seven functions

similar information organizational reform in 2016 when the Chief of Naval Operations renamed the Information Dominance Corps the information warfare community and introduced specialized Information Warfare Commanders (IWC) into Carrier Strike Group composite warfare staffs as authoritative information leadership on par with commanders of primary physical warfare domain counterparts.⁹ The Navy’s information force design is not flawless, but it is effective enough that the Navy Information Forces Type Command has launched efforts to extend the IWC concept to amphibious operations and Maritime Operation Centers that ultimately serve Fleet and Joint Force Maritime Combatant Commanders. Unfortunately, without cooperation and equivalency from the Marine Corps, the Navy Information Type Command efforts are as one-dimensional as non-OIE capable MAGTFs.

Composite Warfare is Naval Multi-Domain Operations

As the Joint Staff works on producing a Joint All-Domain Operations concept by the end of this year,¹⁰ the Marine Corps is exploring the *38th Commandant’s Planning Guidance* to orient towards all-domain operations by nesting with the Navy’s inherently multi-domain composite warfare doctrine. The *Commandant’s Planning Guidance* says, “Marines cannot be passive passengers en route to the amphibious objective area.”¹¹ This rings especially true as thinking shifts from one-dimensional, physical objective area focuses, to tri-dimensional OIE thinking in which “en route” journeys may be the operating objectives. Expeditionary Advanced Base Operations, Littoral Operations in Contested Environments, Distributed Maritime Operations, Freedom of Navigation Operations, and Stand-in Forces concepts collectively interrelate joint and combined campaigns that shall persist across the Competition Continuum, vice occurring at specific points in time that national authorities definitively declare conflicts. Additionally, these operating concepts are based on principles both supporting of and supported by OIE in equal parts with

1	Assure Enterprise C2 & Critical Systems
2	Provide IE Battlespace Awareness
3	Attack & Exploit Networks, Systems, & Information
4	Inform Domestic & International Audiences
5	Influence Foreign Target Audiences
6	Deceive Foreign Target Audiences
7	Control IW Capabilities, Resources, & Activities

Figure 2.

of OIE (see Figure 2) are complex and relevant enough to merit prioritized, continuous application and refinement by the Marines proficient in them.⁸

In comparison, the Marine Corps’ naval partner, the Navy, implemented

physical domain operations. Linking OIE with “conventional” physical domain operations, like those previously listed, achieves MDO. From a maritime perspective, these MDOs will ultimately be orchestrated by composite warfare commanders with support from their major subordinate (which the Navy calls “primary”) warfare domain commanders, including IWCs.

Reinvigorating the Fleet Marine Force (FMF) shows tremendous potential as a maritime force multiplier. OIE are rich with necessity for Marines to work shoulder-to-shoulder with Sailors to navigate the complex terrain that is relevant to maritime operations. Comprehensive, non-materiel capability planning; persistent global battlespace awareness; live large-scale exercises (LSE) and virtual wargaming; and deliberate alliance and partnership building are all activities that a composite Navy-Marine Corps team must engage in prior-to and beyond embarkation for enhanced competitive advantages. All of these activities depend on OIE functions for their effectiveness.

OIE Functions in Naval Context

U.S. Naval forces, and joint forces in general, must overcome bad habits of regarding non-materiel capabilities as bolt-on enablers rather than constant functions. Instilling operational culture that is persistently vigilant toward Operations Security force protection measures can significantly influence perceptions of foreign audiences. Similar enduring commitment is necessary to develop credible Military Deception. Whether Military Deception is as small-scale and tactical as deceptive lighting in amphibious demonstrations, or as robust and strategic as enhancing ambiguity in forward operating force patterns-of-life using Dynamic Force Employment; thoughtful, thorough, and, most importantly, synchronized planning is essential. Strategic communications are no exception either. Commstrat and PSYOP Marines must segregate but align their responsibilities to influence and inform. They coexist, maneuvering in the information environment just as respective national, combat, and protection cyber mission

force teams cross-collaborate while dividing their labor in accordance with policy. The Marine Corps and the Navy run risks of operational fratricide and wasteful duplicative efforts if these functions are not adequately unified amongst knowledgeable specialists in their initial stages of planning and execution. Distinct leadership is overdue to synthesize all forms of naval inform and influence operations, audit their legitimacy, and streamline the constrained authority approval processes for timely execution. IWCs could be such unifiers.

Similarly, amphibious task forces in recent years have implemented various innovative materiel-enabled OIE Concepts of Employment that effectively controlled information capabilities, resources, and activities and enhanced battlespace awareness. Electromagnetic spectrum operations led to Light Marine Air Defense Integrated Systems and Light Armored Vehicles, providing non-kinetic and kinetic fires for ship self-defense targeting of adversary unmanned aerial vehicles and small boat swarms.¹² Electronic Warfare battalions

authorities and formality to doctrinally integrate them into naval tactics, techniques, and procedures. IWCs have the tri-dimensional acumen to advocate and enforce standardized, integrated employment of these functions.

The crown jewel of assured command and control (C2) and federated battlespace awareness lies squarely within the informational dimension in the conceptual form of an expansive and completely interoperable technical network architecture. The joint force circle refers to this concept as Joint All-Domain C2. On a naval scale this concept is the Naval Tactical Grid, which Marine Corps and Navy communications, remote sensing, fires and combat systems, information technology, and intelligence specialists work in partnership to improve by resolving the myriad of dynamic technical capabilities configuration and compatibility issues that the concept presents. IWC leadership should be at the forefront of naval representation working to make informational interoperability a reality.

In addition to ultimately enabling globally integrated fires, informa-

OIE are rich with necessity for Marines to work shoulder-to-shoulder with Sailors to navigate the complex terrain that is relevant to maritime operations.

have also assisted the Navy with own force monitoring of electromagnetic signatures afloat. These successes suggest that own force signature suppression may also be possible for amphibious forces afloat seeking to ensure integrity of emissions control measures and reduce radar and infrared emission signatures. Additionally, Commstrat Marines may occasionally augment audio-visual resources and shipboard personnel contributing to quick-reaction forces performing Visual Information operations that capture, characterize, and report provocative interactions with adversary boats and low-flying aircraft. Unfortunately, these concepts of employments, too, continue to lack definitive driving

tional resources facilitate safe, high-fidelity training in integrated LSEs and wargames. The vulnerabilities of personal electronic devices interwoven into 29 Palms LSEs;¹³ the expanse of connectivity adding depth to Trident Juncture series exercises;¹⁴ and the dynamic decision making aspects of live virtual constructive wargaming that enhance planning and training are informational contributions that extend the bounds of integration to include foreign partners and allies. Information specialists offer critical, integrative functions as the Marine Corps pivots back into fleet operations.

In reinvigorating the FMF, Marines and Sailors alike may be tempted to ask



Training for joint operations in a naval campaign: a U.S. Army CH-47D Chinook helicopter conducting deck landing qualifications on USS America LHA 6. (Photo by Senior Chief Petty Officer Eric Harrison.)

what business the Marine Corps has commanding and directing forces afloat rather than merely assuming a supporting role in its supported-supporting relationship with the Navy? Fluid operations across the Competition Continuum invalidate binary approaches to supported-supporting relationships. Both services are supported and supporting simultaneously. The choice of leading service in truly integrated naval composite warfare operations would be an arbitrary one. While it is certainly daunting to command and direct forces with which one may not be expertly familiar, this principal is the foundation of unity of command within joint combatant command task organization. Nevertheless, to optimize naval OIE, more deliberate and robust cross-training is necessary between Marine Corps and Navy information communities, particularly at the field-grade command level. As evidence of potential in unconventional approaches such as this, consider Gen Mattis's success as amphibious task force commander of Naval Expeditionary Task Force 58 in Operation ENDURING FREEDOM.¹⁵

Conclusion

Distinct information communities have the technical acumen and multi-

dimensional mindsets to lead an information paradigm shift within naval composite warfare. The Marine Corps needs only to acknowledge and legitimize the untapped potential of OIE within naval composite warfare operations. In the long-term, naval composite warfare successes, challenges, and failures will most certainly be a precursory look into the future of Joint All-Domain Operations.

Notes

1. Headquarters Marine Corps, *Marine Air Ground Task Force Information Environment Operations Concept of Employment*, (Washington, DC: July 2017).
2. Gen Stephen J. Townsend, "Accelerating Multi-Domain Operations: Evolution of an Idea," *Military Review*, (Fort Leavenworth, KS: Army University Press, September–October 2018).
3. CDR Henry Stephenson, "Masters or Jacks? Treating the Information Dominance Corps as A General Warfare Competency Risks Weakening the Skill Sets of its Specialists," *Proceedings*, (Annapolis, MD: Naval Institute Press, October 2014).
4. Col Francis K. Chawk III, "Marine Corps Information Operations Center: Past, Present,

and Future," *Marine Corps Gazette*, (Quantico, VA: 2020).

5. *Marine Air Ground Task Force Information Environment Operations Concept of Employment*.

6. Marine Corps, *Renaming of the Combat Service Support Element to the Logistics Combat Element*, MARADMIN 562/06, (Washington, DC: November 2006).

7. Chairman of the Joint Chiefs of Staff, *Doctrine of the Armed Forces of the United States*, JP 1, (Washington, DC: March 2013 incorporating change 12 July 2017).

8. *Marine Air Ground Task Force Information Environment Operations Concept of Employment*.

9. VADM Ted N. Branch, "The 'Information Dominance Corps' Is Now the 'Information Warfare Community,'" *CHIPS*, (January–March 2016), available at <https://www.doncio.navy.mil>; and RDML(sel) Kelly Aeschbach, *Information Warfare SelfSync*, (powerpoint presentation, Naval Information Forces, Suffolk, VA, December 2016).

10. Theresa Hitchens, "New Joint Warfighting Plan Will Help Define 'Top Priority' JADC2: Hyten," *Breaking Defense*, (January 2020), available at <https://breakingdefense.com>.

11. Gen David H. Berger, *38th Commandant's Planning Guidance*, (Washington, DC, 2019).

12. Gidget Fuentes, "Boxer ARG, 11th MEU, Wrap Up 5th, 7th Fleet Deployment," *USNI News*, (November 2019), available at <https://news.usni.org>; and Shawn Snow, "Here's Why the Corps Strapped a Counter-Drone System to the Deck of a Warship in the Suez Canal," *Marine Corps Times*, (January 2019), available at <https://www.marinecorpstimes.com>.

13. Gina Harkins, "A Lance Corporal's Phone Selfie Got His Marine Unit 'Killed' at 29 Palms," *Military.com*, (January 2020), available at <https://www.military.com>.

14. Mark Pomerleau, "Why a Marine Information Warfare Unit Knows It Can Win," *C4ISR-NET*, (June 2020), <https://www.c4isrnet.com>.

15. Maj Michael Valenti, *The Mattis Way of War: An Examination of Operational Art in Task Force 58 and 1st Marine Division*, (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 2016).

