What are OIE?

Definition and functions
by Eric X. Schaner

In January 2020, the Marine Corps issued a joint memorandum to officially define two new terms: *military information power* and *operations in the information environment* (OIE). This article discusses the definition of OIE and its associated "seven functions" in the context of military information power.

OIE

The Marine Corps began developing concepts and implementing organizational changes in July 2017 to build capability and capacity for OIE. As the Corps continues to evolve OIE, new guidance emerged in the January memo. This guidance included a formal definition of OIE as:

> actions taken to generate, preserve, or apply military information power in order to increase and protect competitive advantage or combat power potential within all domains of the operational environment.[1]

The definition establishes a direct link between OIE and the new term military information power. The Marine Corps, through the information warfighting function, plans and conducts OIE to create and leverage military information power for advantage. Military information power concerns exerting one's will or influence over an opponent through four primary OIE actions: *information generation, information preservation, information denial, and information projection.*

The Marine Corps envisions OIE to be persistently conducted in global campaigns throughout the competition continuum and during armed conflict. OIE are conducted to support naval, Service, combatant command, and joint force objectives in the information environment (IE), and across all

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domains. In all cases, Marine Corps OIE are planned and executed in accordance with the following seven functions/tasks:

- Assure enterprise command and control (C2) and critical systems.
- Provide IE battlespace awareness.
- Attack and exploit networks, systems, and information.
- Inform domestic and international audiences.
- Influence foreign target audiences.
- Deceive foreign target audiences.
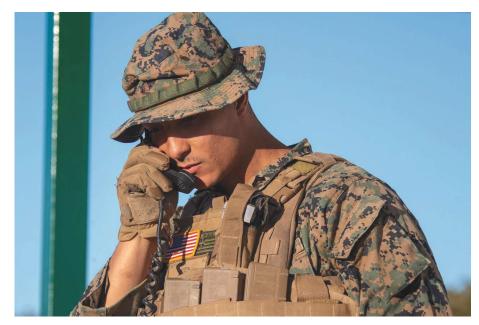- Control OIE capabilities, resources, and activities.

Assure Enterprise C2 and Critical Systems

The first OIE function is vital to information preservation by assuring the information contained within C2, intelligence, communications, and weapons systems is secure, accurate, and trusted. Assured information within these systems is what allows the Marine Corps to sense, make sense, and act with a higher speed, focus, and tempo than an enemy. Assured access to and trust in the information contained within these systems is also the basis of combat power generation. In the post-industrial era, an era sometimes referred to as the Information Age, the generation and projection of combat power is *dependent* on access to and trust in the information upon which weapons systems depend for their functioning. Advanced adversaries understand this information dependency and will attempt to exploit it to counter our traditional combat power advantages.

Succeeding in this function involves a wide variety of activities to include: network modernization, training, DOD Information Network Operations, defensive cyberspace operations,

We must ensure that information received and transmitted is secure, accurate, and trustworthy. (Photo by Cpl Ashley McLaughlin.)

Operational security is only one of several areas of concern within C2 systems. (Photo by Cpl Ashley McLaughlin.)

operations security, signature management, and electromagnetic spectrum operations. In addition to the above, this function also involves coordinating physical attack against aggressors targeting friendly C2 and intelligence systems.

Provide IE Battlespace Awareness

The second OIE function is vital to information generation by providing understanding of threats, vulnerabilities, and opportunities within the IE. This function gathers and fuses disparate information about the IE into a single comprehensive understanding. Through the second function, a coherent picture of the IE is formed by integrating three perspectives: the *threat*, *physical environment*, and *friendly forces*. These three perspectives are fused, analyzed, and developed into a single estimate. The estimate, commonly referred to as the "information environment running estimate," is a continuous evaluation of the IE used to inform the overall understanding of the integrated operational picture. The IE battlespace awareness function therefore provides an information-centric view of the commander's battlespace.

Succeeding in this function requires the ability to gather, fuse, and analyze a wide variety of information.

The intelligence process supports this function by providing an assessment of the IE. However, this function does not exclusively rely on the intelligence process. Rather, it fuses information about the IE from any source that may inform of threats, vulnerabilities, and opportunities.

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Attack and Exploit Networks, Systems, and Information

The third OIE function is vital to information denial by exploiting the opponent's information dependencies for the purpose of disrupting their ability to function or to deny them advantage. This function involves aggressive means to disrupt the opponent from within. There are two primary ways of thinking about this function. The first is from a technical perspective which focuses on accessing, manipulating, disrupt-

ing, or destroying the opponent's data and underlying networks of information needed to generate combat power. The second perspective is non-technical and includes actions such as gaining access to and manipulating or disrupting the human and social influencers who aid the competitor or opponent.

Succeeding in this function requires leveraging the targeting process and the effective application of limited resources to prosecute key nodes within the opposing military system. This function also requires an effective feedback mechanism which leverages any available means of observing the target and identifying the effects of the attack.

Inform Domestic and International Audiences

The fourth OIE function is vital to information projection by truthfully communicating with domestic and foreign audiences in order to build understanding and support for operational and institutional objectives. It also seeks to reassure friends and allies, and deter and dissuade adversaries. While this function is largely led and planned by the communication strategy and operations (COMMSTRAT) and civil affairs occupational fields, they are executed and supported by commanders, staffs, and Marines in addition to the COMMSTRAT and civil affairs capabilities.

Succeeding in this function requires knowing higher-level strategic guidance and the associated narrative that supports friendly operations. Perhaps the most important requirement of this function is the ability to rapidly and dynamically communicate truthful information to counter negative narratives, malign and propaganda activities. In the Information Age there is a continuous battle for information, to include a battle for narratives and the truth.

Influence Foreign Target Audiences

The fifth OIE function is vital to information projection and/or informational denial by directly communicating with or withholding information from a relevant foreign target audience in order to influence their perceptions, decision making, and ultimately their behavior.

This function is used to maintain desirable conditions for our presence or objectives, or to turn unfavorable conditions to our advantage. This function is most closely associated with classical "information operations" and involves the professionals and capabilities, to include special technical capabilities, from this community.

Succeeding in this function requires the ability to integrate and leverage all means of communicating, or denying communications, to a relevant observer. This includes leveraging traditional means of communication such as radio, television, and print media, as well as cellular communications and social media. It also includes understanding and leveraging the message we communicate through our *physical actions* and *activities*. This may therefore require coordination through targeting process, fires and maneuver, in a similar manner as Function #3.

Deceive Foreign Target Audiences

The sixth OIE function is vital to information projection as well as information denial. By directly communicating with or withholding information from a relevant foreign target audience, this function seeks to compel the opponent to act or not act in a manner favorable to friendly force objectives. This function differs from the influence function primarily in the intended effect and authorities required to execute the function.

Succeeding in this function requires the integration of physical actions with specialized capabilities using a whole-of-staff approach. It also includes understanding and leveraging the message we communicate through our physical actions and activities. This may therefore require coordination through targeting process, fires and maneuver, in a similar manner as Functions #3 and #4.

Control OIE Capabilities, Resources, and Activities

The seventh OIE function is vital to information generation, preservation, denial, and projection. It is through this function that OIE capabilities, resources, and activities are harmonized and integrated into all operations. Awareness,

We must be able to deceive the enemy as to our whereabouts and future activities. (Photo by Cpl Cutler Brice.)

timing, and close coordination with all Marine Corps warfighting functions are critical to the effective execution of this function.

Succeeding in this function requires an organizational structure that assigns a commander with responsibility for OIE. Just as GCE and ACE commanders command ground and air operations, and

> *The IE battlespace awareness function therefore provides an information-centric view of the commander's battlespace.*

leverage decentralized feedback-control loops to create combined, coordinated, harmonizing effect, so too should a commander command OIE and leverage decentralized control. To accomplish this, the Marine Corps should consider establishing an Information Combat Element (ICE) and give the ICE commander a command center that gathers, fuses, and displays all aspects of OIE to inform command decision. Establish-

ing an ICE as a fifth MAGTF element, responsible for the seven OIE functions, could resolve the sometimes conflicting and confusing command relationships currently experienced between the MEF Information Group and MEF staff.

Conclusion

Operations in the IE are the evolution of competition and conflict in the Information Age. The Marine Corps is evolving its terms, forces, concepts, and doctrine to meet the challenges of post-industrial Information Age. While these new terms, concepts, and doctrine continue to evolve, OIE will be implemented by the Marine Corps in accordance with the seven functions noted above to create and leverage military information power for competitive and combat power advantage.

Note

1. Joint Staff, *Joint Memorandum: Definitions for Information Related Terms,* (Washington, DC: HQMC, January 2020).