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Sea Viking 2006—Distributed Operations Seminar Wargame #1

Analysis report

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This report was written by a Center for Naval Analyses (CNA) representative on assignment at Marine Corps Warfighting Laboratory.

This document contains preliminary analysis that is subject to further review and modification.

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Contents

Summary

This report summarizes the key themes of the Distributed Operations Seminar Wargame #1, which was held at Quantico, VA, on 2-4 November 2004. The purpose of the wargame was to help improve the Marine Corps Warfighting Laboratory's (MCWL's) understanding of distributed operations (DO) at the Marine expeditionary unit (MEU) level; and to solicit operating force input on the DO concept. DO is a key part of MCWL's Sea Viking 2006 experimental campaign plan—the DO portion of which involves identifying formal school and unit training requirements; drafting tactics, techniques, and procedures (TTPs) for the employment of a DO capability by a Marine air-ground task force (MAGTF); and developing a proposed program of instruction (POI) for a DO platoon. MCWL's experimental goal is to train, organize and equip a platoon capable of conducting distributed operations as part of a 2006 deploying MEU (SOC).

Distributed operations defined

The wargame participants defined DO as a:

> Technique that deploys tactical units across the depth and breadth of a battlespace in order to maximize opportunities to achieve favorable intelligence driven engagements. This is enabled by a robust and easily accessible backbone of C2 and prompt, responsive fires.

DO is an additive capability that changes how the MEU accomplishes its mission essential task lists (METLs). The DO concept, as defined by MCWL, envisions a specially trained and equipped rifle platoon from the ground combat element (GCE). This platoon provides two capabilities to the MEU(SOC) commander—an intelligence, surveillance, and reconnaissance (ISR) capability and a traditional infantry capability.

Wargame results

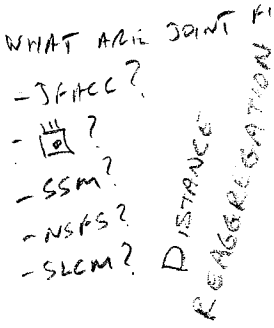
Overall, the participants supported the DO concept. They thought that DO would enhance individual and unit training; that it would upgrade the unit's equipment; and that it would maximize the DO unit's combat power by leveraging joint fires. The participants' primary concern, however, dealt with the squad as the basic building block of a DO platoon. These concerns centered on the survivability of a squad and the capability of the leadership at the squad level.

The wargame participants identified the critical capability sets required of the DO platoon and performed a "gap" analysis—determining the differences in the capabilities of the current rifle platoon, and the capabilities required by the DO platoon. They determined that the DO platoon will need a more robust ISR capability. It must be able access support from a human intelligence (HUMINT) exploitation team (HET), and a signal intelligence (SIGINT) support unit. The DO squads must also be able to transmit and receive imagery—a capability that the rifle squad does not currently possess. Furthermore, the DO squads will require additional training in reconnaissance and surveillance patrolling.

The wargame participants also considered the operational capabilities of the rifle platoon and concluded that they must be improved to build a DO platoon. The DO platoon, as envisioned by MCWL needs to leverage a considerable array of fires. It must be able to employ medium and heavy machineguns—a capability currently held by the weapons company and weapons platoon. It must acquire the ability to plan, request, direct, and promptly receive joint fires. The participants also concluded that the guide billet can provide forward air controller (FAC) functions, and will require joint terminal attack controller (JTAC) certification.

The participants believed that the limited logistics capabilities of the rifle platoon must be augmented to create a DO platoon. The DO platoon must be able to conduct logistics planning, and provide required combat service support functions. Concepts for supply distribution, maintenance, and casualty care need to be developed. Select squad members need to receive maintenance training. Participants believe the DO platoon requires an independent duty corpsman (IDC)—which has advanced paramedical skills and can perform clinical diagnostics and emergency medical health care procedures. In addition, many would like to see combat lifesaver training for all members of the DO squad. The combat lifesaver fills the

gap between buddy aid and the platoon medic in the continuum of care on the battlefield.



There are a number of additional issues that participants identified that need to be resolved before a viable DO capability can be produced. First, the participants assumed that a DO platoon can defend itself with joint fires. This assumption drove the participants to conclude that distance among the squads is irrelevant when the squad is in defense. This assumption hinges on the prompt employment of joint fires. If the DO platoon is not the priority effort, then a DO squad may have to rely upon its own organic fires to defend itself, which most participants believe would be insufficient to repel an enemy attack. Under such a scenario, other squads in the platoon would need to come to the aid of the attacked squad. However, if it takes too long for these squads to mass, the attacked squad may be destroyed.

Emerging issues

The wargame helped MCWL identify a number of critical, emerging issues that need to be addressed in the development of a DO concept of employment. One emerging issue is the degree of dispersion between DO squads. If the DO platoon has to rely on its own organic fires—for either offensive or defensive actions—the distances among squads is paramount because distance will largely determine how quickly squads can be massed. Thus, one critical unanswered question that the wargame surfaced was the overall reliance of the DO platoon/squad on the immediate availability of joint fires and the optimal distribution of squads across the battlespace. This leads to the role of vehicles within the DO platoon structure. Vehicles were to some extent minimized in the wargame by the nature of the terrain in the two scenarios chosen, as well as the recent experiences of the participants. That said, vehicles are likely to be critical assets under less stringent assumptions and may play a decisive role in "massing" the squads for either offensive or defensive purposes. We suggest the Lab readdress the issue regarding the right number of vehicles for the DO platoon in future experimental efforts.

Another emerging issue is the functional capabilities of the DO platoon. During the course of wargame, it was unclear at what level a specific function was required. For example, does a particular capability need to be organic to the fire team, the squad, or the platoon? What functions

should be provided by supporting units? What is the method of employment of the supporting units—are they in general support, direct support, or attached? Other unresolved questions involved whether certain specific functions could be performed from the sea base and what impact this might have on the footprint ashore. To some extent, the wargame touched on some aspects of these questions, but they need further refinement. Perhaps a first step would be to develop a list of DO functions and to apportion those functions among the DO platoon and the supporting units based upon a pre-established set of criteria.

LOG SUPPORT?

Introduction

The Marine Corps Warfighting Laboratory (MCWL) conducted the Sea Viking 2006 (SV 06) Wargame #1 from 2 to 4 November 2004 at Quantico, VA. The principal hypothesis of SV 06 is that a forward deployed Marine air-ground task force (MAGTF), with enhanced training and equipment, can support and conduct immediate joint forcible-entry operations (JFEO). The purpose of the wargame was toimprove MCWL's understanding of the employment of distributed operations (DO) at the expeditionary strike group (ESG) / Marine expeditionary unit (MEU) level; and to solicit operating forces input on the DO concept. In particular, the wargame had three key objectives:

- Identify 2006 MEU capability shortfalls.
- Identify potential changes to "echelons above the platoon."
- Identify issues for follow-on experimentation/study.

The wargame was intended to shape follow-on concept development and live experimentation, with an eye towards producing a chapter for a future MEU(SOC) playbook. This is an important task, given that the Lab will prepare a rifle platoon for employment as a DO force, with a deploying MAGTF, by the end of 2006. This means that the Lab will need to develop tactics, techniques, and procedures (TTPs) based on the evolving DO concept and conduct experimentation to evaluate experimental TTPs. Furthermore, the Lab will need to develop and assess training and equipment packages to prepare an infantry platoon for employment as a DO force with a MAGTF and develop procedures for the planning, supporting, integration and command and control (C2) of a DO platoon.

Wargame design

The wargame had a seminar format, with representatives drawn from I Marine Expeditionary Force (MEF), III MEF, 1st Marine Division, 22d MEU(SOC), the Marine Corps Combat Development Command

(MCCD), and Headquarters Marine Corps (HQMC). There were also representatives from the Navy (Second Fleet and the Office of the Chief of Naval Operations (OPNAV)) and Defense Advanced Research Project Agency (DARPA) present as well. . The wargame itself had four major parts:

- Several DO introductorybrief (where MCWL staff briefed the participants on the DO concept)
- A discussion of a sample scenario (Scenario 1) in a plenary forum
- A discussion of a second scenario (later addressed by two separate breakout cells)
- A discussion of general perceptions of the participants on the DO concept (also conducted by the breakout cells individually.)

The DO introductory briefs ensured that the participants had a clear understanding of wargame goals, and introduced the attendees to the DO concept, including a proposed T/O and T/E for a DO platoon. The MCWL controllers then walked the participants through a sample scenario to prepare them for the actual wargame, which consisted of answering several key questions about scenario 2 and a general discussion session.[1] The MCWL controllers briefed scenario 2, and then broke the participants into two separate cells to discuss a set of prepared questions. These questions are shown in table 1. The cells concluded their discussions with an additional set of general questions about DO—questions not related to scenario 2. These questions, shown in table 2, were also outbriefed at the flag-level. MCWL adopted the two-cell approach to provide two independent sets of observations. In addition, the participants were surveyed individually, to provide a forum for those who might have a different point of view than their cell's official response.

[1] Both scenarios centered on the role of a MEU in the Global War On Terrorism (GWOT).

Table 1. Scenario specific questions

Objective 1: Identify 2006 MEU capability shortfalls

1. Can the MEU execute the other assigned missions while concurrently employing the DO platoon?
2. To best accomplish this mission, do the squads need to be motorized? If not, how does the platoon best accomplish the mission with the six vehicles available for SV06?
3. Should there be a sniper capability within the DO platoon?
4. How far apart would the squads operate?

Objective 2: Identify potential changes to "echelons above the platoon."

1. How do you integrate the DO platoon into the MEU ISR plan?
2. What are the command relations (tactical control)?
3. What are the ramifications of a DO platoon beyond its logistics culminating point?

Objective 3: Identify issues for follow-on experimentation or study

1. What issues are recommended for follow-on experimentation or study?

Table 2. General discussion questions

Objective 1: Identify 2006 MEU capability shortfalls

1. Which MEU mission essential tasks are enhanced by a DO capability?
2. Is DO really a "value added" in the GWOT?
3. Are there terrain issues with DO?
4. What are the challenges associated with employing a DO platoon in areas where SOF is operating?
5. What is the right number of ITVs for a DO platoon?
6. If the DO platoon had 11 ITVs, your thoughts on inserting the force?

Objective 2: Identify potential changes to "echelons above the platoon."

1. Additional planning tasks for the ESG, MEU, MSEs (to Company level)?
2. To whom does the DO squad and platoon submit combat reports?
3. How will requests for fires (air, sea, surface) be processed?
4. Who authorizes engagement with direct fires?

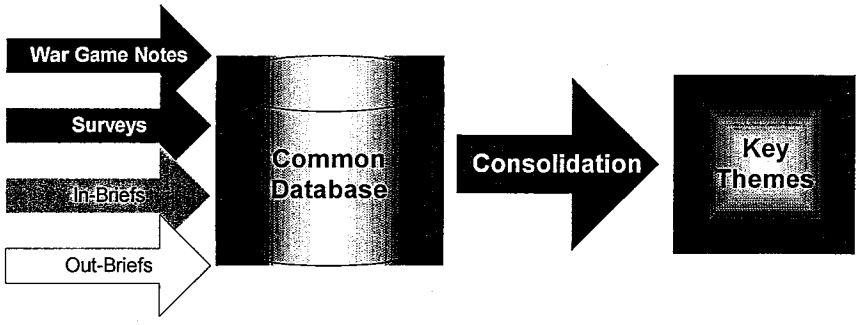
Objective 3: Identify issues for follow-on experimentation or study

1. What additional capabilities are required by the DO platoon? MEU?
2. What issues are recommended for follow-on experimentation or study?

Assessment process

One of the Center for Naval Analysis (CNA) analysts assigned to MCWL attended the wargame to chronicle the participants' discussions and incorporate notes and observations from another analyst attending the wargame from the Studies and Analysis Division of MCCDC. Collectively, we condensed our wargame notes, the surveys, MCWL's introductory briefs, and the participants' out-briefs into a common database—carefully eliminating any duplicate information. We consolidated the database to develop a set of key themes to describe the outcome of the wargame. This process is shown in figure 1.

Figure 1. Assessment process



The assessment process is inherently subjective, since the principal source of wargame inputs is the opinion of the participants and game controllers. Our role, as analysts, is to try to objectively distill the salient points from the wargame, while minimizing the input of our own biases. This report focuses on the key themes that emerged from the wargame. This involves defining DO, discussing its benefits and limitations, and identifying the potential changes that need to be made to today's rifle platoons to produce a DO platoon. We also highlight any major differences in viewpoint observed among the participants, or the game controllers. Furthermore, we try to clearly differentiate the views of the analysts from those of the participants and controllers. As a general rule, we do not provide much description of the scenario, unless it has a direct impact on a conclusion drawn from the wargame. Readers interested in the scenario details are encouraged to review the companion appendix to this report, which includes most of the slides presented during the wargame.

Distributed operations

In this section, we provide the major definitions developed and used during the wargame. This section defines the DO concept and the DO unit.

What is DO?

The wargame participants developed their own definition of DO.

> A technique that deploys tactical units across the depth and breadth of a battlespace in order to maximize opportunities to achieve favorable intelligence driven engagements. This is enabled by a robust and easily accessible backbone of C2 and prompt, responsive fires.

As a "technique", DO is not a new technique. Rather, it is an "additive" capability which changes how a mission-essential task is accomplished.

The DO concept for the MEU(SOC), as provided by MCWL game controllers, envisions a specially trained and equipped rifle platoon from the ground combat element (GCE). This platoon provides two capabilities to the MEU(SOC) commander—an intelligence, surveillance, and reconnaissance (ISR) capability and a traditional, but more robust, infantry capability. Moreover, the DO platoon has greater inherent firepower than other MEU(SOC) ISR assets and a similar capability to direct joint fires. This specially equipped and trained platoon can also perform the traditional infantry tasks of a rifle platoon, either independently or as part of a rifle company.

Why DO?

Increased speed

The participants thought the DO concept should increase the speed of a platoon or squad. By increasing speed, the participants meant reducing the amount of time it takes for a combatant to observe his surroundings and his enemy, orient (i.e., develop courses of action), make a decision and take action. They felt that DO would improve a force's ability to operate quickly, at least "quicker" than an opponent could react. This process is commonly called getting inside an enemy's OODA loop. It was believed that by sustaining such a tempo of operations, a DO unit could potentially defeat a numerically larger enemy:

> As our enemy observes and orients on our initial action, we must be observing, orienting, deciding, and acting upon our second action. As we enact our third, fourth, and fifth move, the time gap between our actions and our enemy's reactions increasingly widens....everything he does is too late [1].

How does DO increase speed? Participants felt that DO would help decentralize decisionmaking by allowing the squad leader to select his own tactics, and to coordinate directly with other squads. This should be faster than having to work decisions through the higher command. Second, participants felt that the extended experience and training of the DO units should increase the speed of decisionmaking and lead to specific actions. Third, participants believed that DO positions a combat leader closer to the point of friction, which should allow him to directly influence the battle as the situation unfolds.

Economy of force and mass

The participants believed that DO would allow the platoon commander economy of force, i.e., to judiciously employ and distribute his forces in a more favorable manner and mass them at a time of his choosing. Furthermore, when the time comes to execute offensive actions, the DO platoon commander would be well positioned to concentrate the effects of different elements of combat power—including joint fires— against a single target. One example cited was the platoon commander who could

distribute his squads to gain and maintain contact with enemy forces, maneuver the squads to gain tactical advantage, and then concentrate superior combat power at the decisive time and place. Thus, the same forces that provide the reconnaissance functions that locate the enemy and identify his weaknesses could be the same that lead the attack against him. This led participants to conclude that a DO platoon should pack more combat firepower than a current platoon, have the same footprint as a current platoon, and be easier to deploy. Thus, participants believed that DO units could be used to shape the battlefield prior to the establishment of a combat-ready Marine expeditionary brigade (MEB) ashore.

Factors impacting DO employment

When to use DO

The participants identified the following factors that favor the employment of DO:

- The environment is a semi-permissive one with a rich electromagnetic spectrum (as a source of actionable intelligence) .
- The enemy is dispersed and incapable of synchronized operations.
- Time is not a limiting factor, allowing units the time to effectively work an area.
- There is a minimal air defense threat.
- As a potential employment of an economy of force effort.
- In concert with other conventional operations.

Many of these criteria are met for the Global War On Terrorism (GWOT), and most of the participants felt like it would be an effective technique in Afghanistan and Iraq. In fact, many participants felt that the Marine Corps is employing DO today. These DO operations aren't being executed under the title of DO. However, the Marine Corps is currently conducting operations similar to DO for search and attack, zone reconnaissance, and counter improvised explosive device (IED) and mortar operations.

When not to use DO

The participants had some concerns about when the DO technique would not make sense—i.e., when a careful risk assessment would be needed before employing it. This included:

- In urban environments—where distributed units can become separated by the urban terrain and the disposition and density of the urban population can be problematic.
- When the enemy can mass combat power greater than the DO unit can produce. Participants were particularly concerned that a DO platoon might not be able to leverage sufficient combat power to defeat enemy units in Afghanistan.
- When the enemy is already massed.

We address additional issues and concerns about DO and how it might be employed in the following section, which addresses the key themes of the wargame.

Key themes

In this section, we lay out the key themes of the wargame, organized by warfighting function. In each paragraph below, we describe the capability needed by the DO platoon—as defined by the participants—and then provide the participants' assessment and areas of concern regarding that capability. In essence, the participants performed a gap analysis—determining the differences in current capabilities, and the capabilities required by the DO platoon.

Assumptions

Breakout cell #1 adopted the following assumptions in their deliberations:

1. Combat search and rescue (CSAR) was provided
2. Casualty evacuation (CASEVAC) was available
3. The DO platoon will be on the ground a minimum of 14 days
4. DO squads will be able to defend themselves with a combination of organic and joint fires.

Some participants, however, did not concur with these assumptions. One participant noted that recovering an entire platoon could easily overwhelm traditional CSAR, and that a tactical recovery of aircraft and personnel (TRAP) mission would be required.

In addition, many participants rejected assumption 4. They questioned the combat effectiveness of a DO platoon—arguing that the DO company is the right level of implementation. At the outset of the wargame, the consensus of the participants was that a rifle squad is not the appropriate unit of action for DO because it is too small for independent action. A unit becomes decisively engaged when it cannot withdraw under its own power without reinforcement. It does not take much for a squad to become decisively engaged—participants claimed that platoons, not squads, were the smallest units employed in Afghanistan. Those critics of the SV

06 DO concept argue that a squad cannot leverage warfighting functions—it has no intelligence, logistics, or force protection. The participants went on to say that the stealth of a rifle squad cannot be assumed, given that it was practically impossible to move in Afghanistan without being observed. If the enemy is dispersed in small units, a platoon can hold its own because of joint fires, but a squad cannot. Furthermore, they argued that squad leaders lack the maturity and experience to autonomously make the kind of decisions required by the DO concept. To make matters worse, many squads are actually led by corporals and lance corporals rather than sergeants. Thus, these participants argue that a DO company, with autonomous DO platoons, is a better model than a DO platoon with autonomous DO squads.

Intelligence

Information collection and processing

Participants talked at length about the DO platoon's ability to collect and process useful intelligence. Overall, they felt that the DO platoon would need significant intelligence capabilities, including the ability to collect information, quickly process the information into actionable intelligence, and disseminate the intelligence. Being in close contact with the enemy and often in enemy territory, the DO platoon gains considerable information about enemy strength, location, and armament; the nature of the terrain; and the status of key facilities. In addition, the DO platoon may collect information from enemy prisoners of war (EPWs), enemy documents and computers, and the indigenous population. This means the DO platoon must be able to communicate effectively, knowing the local languages, customs and cultures.

Given that most intelligence assets are located at the battalion level, it's not surprising that the participants determined that significant investments need to be made in the platoon's intelligence capabilities. The DO platoon commander, for instance, will need access to theater and national intelligence assets. Since aggressive patrolling will be required to collect information on the enemy, the squads will require extensive patrol training, and the DO platoon will need to be assigned a reconnaissance area of operations. In addition the DO platoon will likely need a human intelligence (HUMINT) exploitation team (HET) to be attached, which can

assist in screening operations, the interrogation and debriefing of EPWs. Some participants also believed that the DO platoon would require signal intelligence (SIGINT) support unit attachments to derive intelligence from the interception, processing, and analysis of foreign communications. In addition, it was felt that the DO platoon would require translators for each squad (as well as the platoon headquarters) and extensive cultural awareness training.

Common operational picture

Developing an accurate common operational picture (COP) is a critical component of the DO concept. Participants believed that the DO platoon must be able to see both enemy and friendly locations, and key terrain features. The DO squads need to know, that even though they may not be able to physically see their sister squads, they need to know their exact location. Furthermore, the DO squads must be able to send and receive imagery.

Current MEU communications are limited. Participants believed that real-time information flow may make it down to the company-level, but rarely, if ever, make it down to the platoon-level. One of the participants relayed that the USS *Wasp*, a multipurpose amphibious assault ship, lacked reliable Secret Internet Protocol Router Network (SIPRNET) connectivity and could not always receive real-time imagery. If a more reliable communications capability between forces operating ashore and the sea base cannot be established, it will severely limit a DO platoon's ability to influence the joint fight.

MCWL plans to outfit the experimental DO platoon with the Expeditionary Tactical Communications System (ETCS), which should give it an over-the-horizon (OTH) voice and data communications capability.[2] In addition, the system provides location information for all ETCS users in the net, allowing the platoon commander and squad leaders to potentially view where all their squads are currently located. ETCS, however, does

[2] ETCS is a modified version of the Iridium system that will provide netted push-to-talk communications. The system is based upon a modified Motorola 9505 handset with an integrated Global Positioning System and a Group Radio Controller to manage the voice/data traffic and the individual nets. [2]

not transmit or receive imagery. Participants mentioned that a Special Operating Force (SOF) program called "Rover" might meet the DO platoon's imagery needs. Rover is a laptop based program that links Predator imagery to AC-130 gunships. SOF units "paint" circles around targets on the imagery and then shoot the information directly to an AC-130 [3]. A DO platoon could use a similar system to move joint unmanned aerial vehicles (UAVs) into position and share imagery. Some participants, however, argued that USMC access to joint assets may be severely limited if the demand for such assets is high.

Operations

The primary mission of a rifle platoon is to "locate, close with, and destroy the enemy by fire and maneuver or to repel his assault by fire and close combat" [4]. This mission does not change for a DO platoon. However, the source and type of both indirect and direct fires is significantly different for the DO platoon than it is for an ordinary rifle platoon.

In this section, we pay particular attention to command and control of fires, a topic that was discussed in earnest during the wargame. Within the confines of the game, the MEU was viewed as the supported headquarters within the ESG. The DO platoon, as well as any reinforcing company elements, were under the tactical control (TACON) of the MEU CE. The MEU area of operations (AO) was assigned by the Joint Task Force (JTF) commander. A high-density airspace coordination zone (HDACZ) was established within the MEU AO, and was controlled by the tactical air control squadron (TACRON) aboard ship. Fires were allocated and apportioned by the MEU commander, with requests normally submitted via the platoon commander.

Joint fires

The DO platoon—as defined by MCWL during the wargame—had access to a robust set of joint fires, which have a longer range than more conventional indirect fires, such as artillery, naval gunfire (NGF), mortars, and rockets. The Ground Laser Target System (GLTD II) and Target Handoff System Experimental Plus (THS X+) was used to designate targets for joint aviation. The GLTD II is a compact, lightweight, portable laser target designator and rangefinder. The GLTD II is capable of exporting

range data via an RS422 link and importing azimuth and elevation. It enables Marines to direct laser-guided smart weapons, such as Paveway bombs, Hellfire missiles, and Copperhead munitions [5]. The THS X+ is targeting software that enables precision-target location compatible with GPS weapons and digital-mission handoff to fire-support agencies [6]. Prompt employment of joint fires is a critical warfighting capability, which gives the DO rifle platoon more lethality than a current platoon.

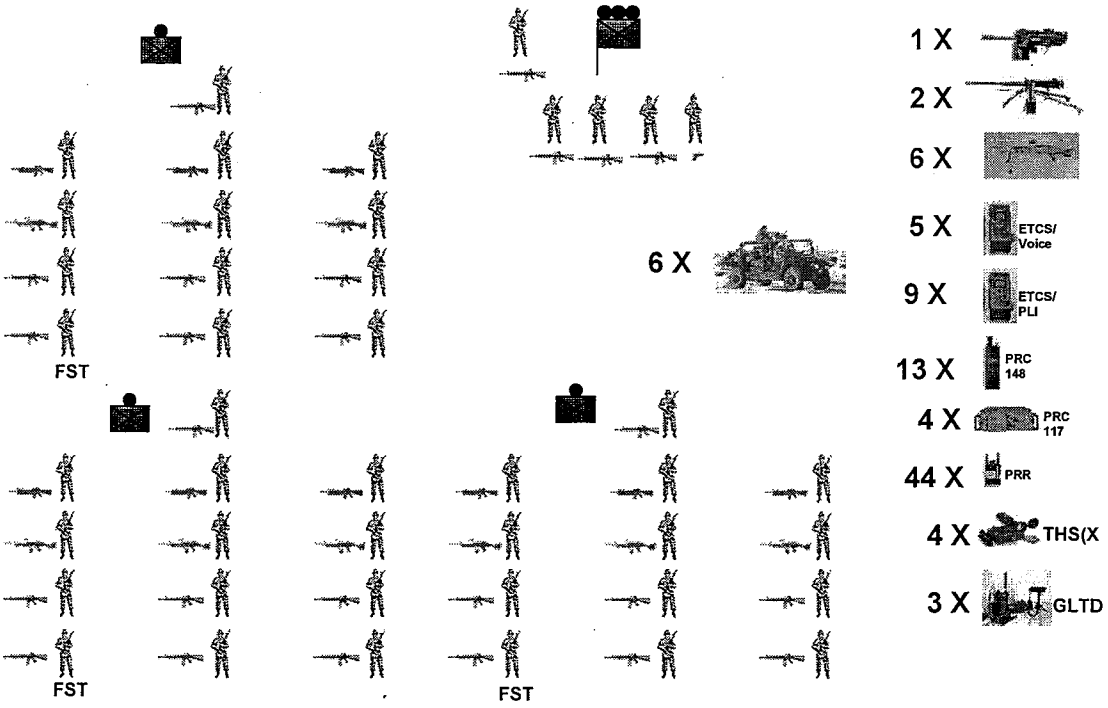
Each DO squad will require an organic capability to call fires. The general conclusion of the participants is that it would be difficult for the squad leader to control his squad and call in fires at the same time. Therefore, they concluded that the guide billet can provide forward air controller (FAC) functions, and will require joint terminal attack controller (JTAC) certification.[3] The FAC has three major functions: (1) managing air space, (2) requesting air support, and (3) providing a target area brief. In addition he must be familiar with the capabilities of the aircraft, its ordnance, and sensors. The call for pre-planned fires would be routed from the squads through platoon commander to the MEU command element (CE) Supporting Arms Control Center (SACC) or Battalion Landing Team (BLT) Fire Support Coordination Center (FSCC). The participants were concerned about the DO platoon's priority for joint fire support—i.e., it was felt as if they may have to compete for limited resources.

Organic fires

In addition, the DO squad, as envisioned by MCWL, has more robust organic direct fires than a standard rifle squad. A notional platoon is shown in figure 2.

[3] JTAC certification may be problematic for the DO platoon because the proposed training and readiness (T&R) manual currently requires a JTAC to be the rank of staff sergeant or higher. The guide billet, as currently envisioned, is a sergeant's billet.

Figure 2. A notional DO platoon



FST=Fire Support Team

The DO platoon has several weapons not normally found in rifle platoon—including the M240 medium machinegun, the M19 automatic grenade launcher, and the M250 machinegun. Furthermore, the DO squad has access to an advanced infrared weapon sight, the PAS-13 thermal weapon sight (TWS). The PAS-13 TWS can see in total darkness, adverse weather, and through battlefield smoke and dust [7].

The MCWL wargame controllers asked if a sniper capability should be added to the DO platoon. Nearly all of the participants agreed that a designated marksmen (DM) capability was preferable to a sniper capability. The DM, unlike the sniper, would use common ammunition, reducing logistical concerns.

Maintaining unity of effort may be difficult when the squads are autonomous. The participants were nearly unanimous that squads should not make the decision to engage the enemy. However, there may be instances

where a squad must make the decision to engage the enemy. Therefore, the squad leader must be issued clear and concise commander's guidance and rules of engagement.

Mobility

The DO platoon, as described by MCWL, will be provided internally transportable vehicles (ITVs), which can fit into the CH-46 or the CH-53. The manufacturer also claims that two ITVs can be sling loaded under a single helicopter. The ITV is designed to provide high-tactical mobility for light forces [8].

The participants were mixed about the value of vehicles to the DO platoon. On the positive side, participants thought the vehicles would provide organic CASEVAC, sustainment, and reinforcement capabilities. In addition, some participants argued that vehicles would provide the platoon with a means to break contact with the enemy. On the negative side, participants thought vehicles would increase maintenance, signature and fuel requirements. That said, many felt like the rough terrain in the scenario would tie the vehicles to the roads, leaving them vulnerable to ambush and improvised explosive devices (IEDs). Ultimately, participants decided that the DO platoon should have enough vehicles to move the entire platoon, giving commanders the flexibility to employ the vehicles in numbers dictated by any given mission. Requirement estimates ranged between 8 and 11 ITVs.[4] Thus, the DO platoon will require training on how to use the vehicles and vehicle maintenance if vehicles eventually become a part of the platoon's table of equipment.

[4] The participants were given two capability sets for scenario 2, one with 6 ITVs and the other with 11 ITVs. (The number of heavy-lift rotary wing aircraft was also increased from 3 to 5 helos.) The participants argued that, given the pros and cons of vehicles in the scenario, they would not choose to employ all 11 vehicles. Given 6 vehicles, the participants chose to mobilize the headquarters with 2 vehicles and one squad with the remaining 4 vehicles, allowing the creation of a mounted reserve. The participants, however, argued that, had the terrain been flatter, they might have employed all 11 vehicles under such conditions.

Support

Supply

The participants assumed that the DO platoon would be self sustainable for 72 hours. They further assumed that the DO platoon would be resupplied every 48 hours, via C130 airdrop or by CH-53E, based on the air defense threat. The participants believed that sustaining the force would be a challenge for the MEU's air combat element (ACE) in scenario 2. The area of operations in the scenario is the Bridgeport, CA, corridor, which is located in the Sierra Nevada mountain range. The corridor consists of mountains, canyons, and valleys, with mountain peaks exceeding 10,000 feet. The average elevation in the corridor is 7,000 feet. The ACE will only be able to employ CH-53Es for this mission because of the altitude of the AOR and the 200-mile distance to the sea base. Participants were concerned that the ACE may not be able to support other MEU missions during these operations, because all of it's CH-53Es will be dedicated to supporting the DO platoon. Furthermore, the participants believed that distributing the squads far apart will strain the supply chain, since supplies will have to be pushed further on the last leg of the supply route—which would most likely be on the ground.

Health services

Participants felt as if the DO platoon must be prepared to care for ill and injured Marines until they can be evacuated. The participants believed that a single corpsman at the platoon headquarters was insufficient for the entire DO platoon. The participants believed that the DO platoon required an independent duty corpsman (IDC)—which has advanced paramedical skills and can perform clinical diagnostics and emergency medical health care procedures. In addition, many participants felt that all members of the DO squad should have combat lifesaver training. Combat lifesavers have a combination of first aid skills and emergency medical technician (EMT) skills. This provides them with basic skills for dealing with trauma wounds and medical emergencies. The combat lifesaver program bridges the gap between buddy aid and the platoon medic in the continuum of care on the battlefield [9].

Conclusion

Overall, wargame participants supported the DO concept. They liked MCWL's proposed enhancements to individual and unit training, upgrades in equipment, and the ability of the DO unit to leverage joint fires. In fact, they generally felt that the DO platoon enhanced the capability of the MEU to execute its METLs. Furthermore, most participants felt that the MEU itself could still execute other assigned missions while concurrently employing the DO platoon in the scenario—given adequate ACE support (that is, the ACE would need to use its CH-46s, which were not utilized in these scenarios).

There were, however, a number of concerns voiced about DO. For instance, most participants were concerned about using the squad as the basic building block of a DO platoon. These concerns centered on the survivability of a squad and the capability of the leadership at the squad level. While the leadership issue may not be a problem if the DO platoon can select the best Marines in a Marine division, it could be an issue if DO is implemented on a large enough scale that quality manpower becomes scarce. There were also concerns voiced about the survivability of a DO squad. Several participants brought up current conditions in Afghanistan and Iraq, which would make it difficult for a lone squad to survive. That said, most everyone felt as if there may be some conditions where a DO platoon, with distributed squads, would be an effective weapon in a GWOT scenario. This led some participants to argue that a DO unit should be small enough to tempt the enemy to attack but large enough to defend itself until joint fires and reinforcements arrive. Thus, in the GWOT, where the enemy doesn't wear a uniform, and many civilians carry weapons, DO may provide an effective technique for helping identify the enemy.

Overall, the wargame identified a number of issues that need to be resolved to provide a 2006 MEU(SOC) with a DO platoon. First, the assumption that a DO platoon can defend itself with joint fires, drove the participants to conclude that distance among the squads is irrelevant when the squad is in defense. This assumption hinges on the prompt employ-

ment of joint fires. If the DO platoon is not the priority effort, then a DO squad may have to rely upon its own organic fires to defend itself, which most participants believed was insufficient to repel an enemy attack. Under such conditions, other squads in the platoon may need to promptly come to the aid of an attacked squad. If this movement in support of an attacked squad takes too long, a squad could be destroyed. Thus, we believe that if the DO platoon has to rely on its organic fires—for either offensive or defensive actions—the distances among squads is of paramount concern, as is the mobility provided to each squad. With regard to tactical mobility, while ITVs were to some extent minimized by the terrain in the scenario and the recent experiences of the participants, they are likely to be critical assets under less stringent assumptions.[5]

Another emerging issue is the functional capabilities of the DO platoon. During the course of wargame, it was unclear at what level a specific function was required. For example, does a particular capability need to be organic to the fire team, the squad, or the platoon? What functions should be provided by supporting units? What is the method of employment of the supporting units—are they in general support, direct support, or attached? Other unresolved questions involved whether certain specific functions could be performed from the sea base and what impact this might have on the footprint ashore. To some extent, the wargame touched on some aspects of these questions, but they need further refinement. Perhaps a first step would be to develop a list of DO functions and to apportion those functions among the DO platoon and the supporting units based upon a pre-established set of criteria.

In addition, the wargame participants had some additional questions and topics they believe need to be addressed in the future:

- Can a DO platoon plan and execute fires employment while decisively engaged?
- Would it be possible for the Lab to train and experiment with larger units?

[5] We conclude that the critical questions of "How far apart would the squads operate?", and "What is the right number of ITVs for a DO platoon?" need further analysis.

- How would a DO platoon be employed as part of a larger force conducting conventional operations?
- How could DO be institutionalized and synchronized throughout the Marine Corps training and education system?

References

[1] *Tactics*, Marine Corps Doctrinal Publication (MCDP) 1-3, Jul 1997.

[2] Marine Corps Warfighting Laboratory, Expeditionary Tactical Communication System Fact Sheet, Dec 2003.

[3] http://www.usafa91.com/Lessons/CSAF%20getRadar.txt

[4] *Marine Rifle Company / Platoon*, Fleet Marine Force Manual (FMFM) 6-4, Feb 1978.

[5] http://www.dsd.es.northropgrumman.com/DSD-Brochures/laser/GLTDII.pdf

[6] Marine Corps Warfighting Laboratory, Target Handoff System (Experimental) fact sheet, Dec 2003.

[7] http://www.raytheon.com/products/tws/

[8] http://www.defense-update.com/products/i/itv-1.htm

[9] http://encyclopedia.thefreedictionary.com/Combat%20lifesaver

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