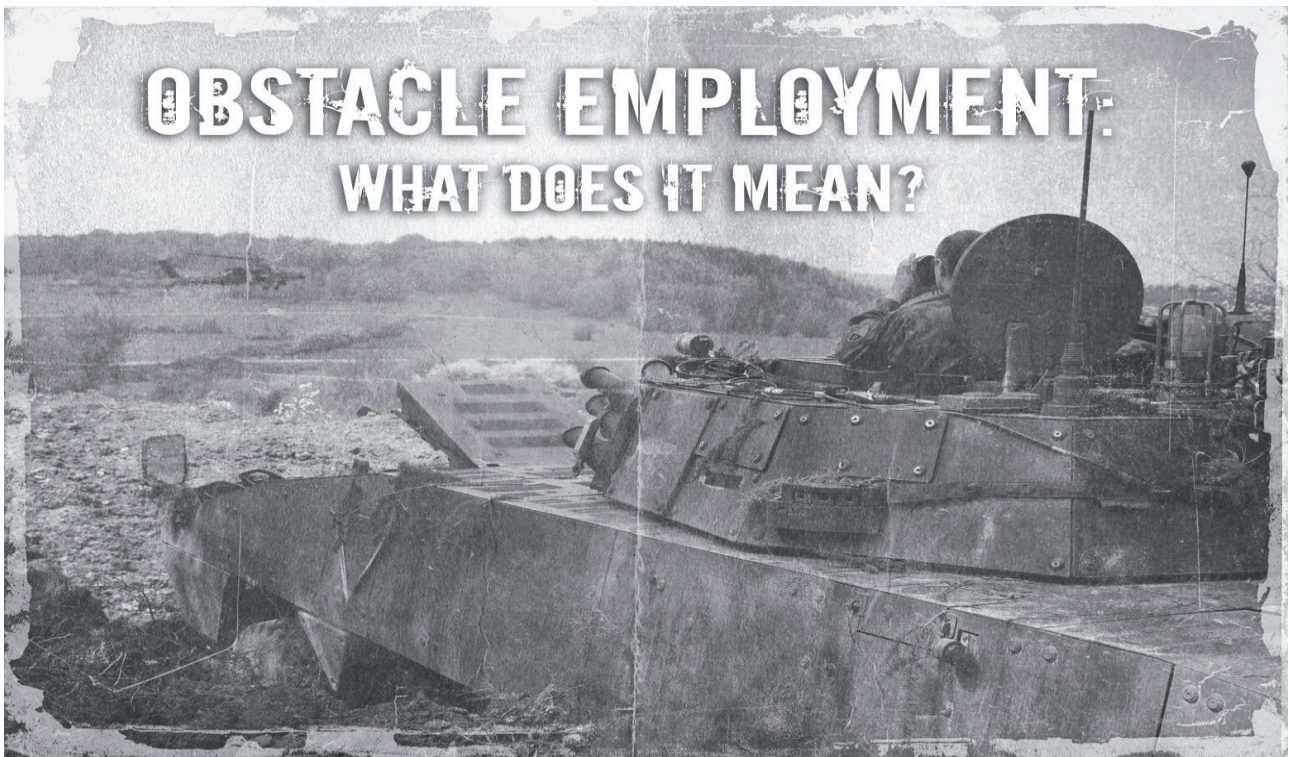




OBSTACLE EMPLOYMENT : WHAT DOES IT MEAN(2)

阻絕部署之要義(下)

作者：約翰·米勒少校

翻譯：楊士範上尉

Employ in Depth

Obstacle control measures give commanders obstacle emplacement authority for a geographic area. Brigade and lower obstacle control measures are normally associated with obstacle intent to achieve a desired effect on the enemy throughout the depth of a specified geographic area. Engineer planners cannot ignore the concept of depth during obstacle planning. Obstacles employed in depth force the enemy to consume reduction assets early and often and eventually force the enemy to avoid the remaining obstacles, thereby achieving the obstacle intent. ATP 3-90.8, *Combined Arms Countermobility Operations*, lists the following benefits of employing obstacles in depth:

縱深配置

指揮官於戰鬥地境內擁有障礙物設置之權限。旅級含以下之障礙物設置通常會沿敵可能來襲之方向結合特定地形及障礙物設置意圖去達成預想之效果。

撰寫工兵計畫不能夠忽視防禦縱深配置的概念。防禦縱深配置會迫使敵過早消耗破障能量而且疲於排除障礙，進而達到防禦之目的。美國陸軍教育訓練準則3-90.8聯合反機動行動列舉了以下防禦縱深配置的優點：

- Disrupts the timing and tempo of an attack.
- Stresses enemy mission command.
- Depletes obstacle reduction assets.
- Increases exposure to fires.
- Degrades the will to fight.
- 干擾敵攻擊時間與節奏
- 壓制敵任務指揮
- 消耗敵破障能量
- 使敵充分暴露於火力涵蓋範圍.
- 削弱敵戰鬥意志



Ultimately, obstacles employed in depth prevent the enemy from declaring a single breach operation as the decisive point of the battle and massing effects at that location to achieve success. There are many reasons why obstacles are not employed in depth. The most common reasons at JMRC are—

最後，防禦縱深配置是避免敵僅對單一突穿口突穿即可擴張戰果。有許多原因為導致防禦未採縱深配置，在多國聯合戰備中心常見的原因有：

- Absence of plans to fight through the depth of the operating area.
- Failure to plan obstacles in depth.
- Obstacle resourcing not planned or not properly executed.
- Obstacle plans not completed early, resulting in incomplete obstacle execution.
- Obstacle plans not synchronized with the rest of the maneuver plan
- 作戰地區內未擬定防禦縱深配置計畫
- 防禦縱深配置計畫失敗
- 現有資阻材未詳盡規劃或適當執行
- 障礙物設置計畫未能盡早頒布，導致阻絕未設置完成
- 障礙物設置計畫未能與主計畫同步

These trends are primarily observed during the planning and preparation phases of combined arms obstacle integration. Although engineer planners are not responsible for developing the maneuver concept of operation and ensuring that the plan maximizes the depth of the operating area, engineers can the plan by identifying the requirements gap in the current plan with the commander's intent. For example, the commander's intent is to delay the enemy advance along an avenue of approach for a set period of time. But in the plan developed by the staff, only one engagement area has a template, with a corresponding disrupt obstacle group located along a segment of that avenue of approach. Engineer planners should articulate to the commander and staff that adversely affecting the mobility of an enemy force along that avenue of approach in the most effective manner requires obstacles employed in depth. Most engineer planners recently observed on JMRC staff are precommand captains who have not established their credibility as the technical and tactical masters of their craft. The ability of these captains to influence the maneuver plan is limited, but the engineer planner is obligated to address any identified military engineering gaps with the commander and staff.

以上這些態樣大多都發生在障礙物統一運用計畫和準備階段。雖然工兵參謀不對行軍規劃的發展方向和確保作戰區域防禦縱深配置最大化所負責，但工兵參謀可以藉由研判所需跨越之地障去建議戰鬥部隊指揮官下達決心。舉例來說：指揮官企圖是要遲滯敵一段時間，避免敵先期進入敵接近路線。但是這參謀的計畫內容卻只有一個作戰地區內有防禦縱深配置。工兵參謀必須反覘防禦縱深配置對敵接近路線影響之效果並具體向戰鬥部隊指揮官報告。近期多國聯合戰備中心幕僚觀察新科工兵上尉們尚未在戰術及戰法上能融會貫通，因此尚未建立起自身可靠度，這些新科工兵上尉們的建議要影響主計畫是有限的，但是就工兵參謀的角度和義務便是要對任何經證實的壕溝地障向戰鬥部隊指揮官及參謀意見具申。

Conversely, the maneuver plan may take advantage of the entire depth of the operating area to affect the enemy force, yet the engineer may not plan the corresponding obstacles to support the operation. Failure to plan obstacles occurs for various reasons, but usually originates from improper employment of the staff engineer or from a dearth of obstacle planning knowledge and experience. During one JMRC rotation, the maneuver commander's intent was to block enemy forces along an avenue of approach and disrupt enemy forces along another avenue of approach. Corresponding obstacle belts were assigned to the task forces, but staff engineers did not establish planned obstacles at either the brigade or task force level, resulting in obstacles being developed between engineer and maneuver platoon leaders. The depth of the obstacles employed in that rotation was generally 500 meters to either side of a designated phase line, through which the OPFOR quickly passed. Staff engineers must take the time to plan obstacle groups and directed obstacles that support the commander's plan and are placed in depth throughout the operational area. Senior engineer leaders in the brigade combat team must take the time to coach and mentor staff engineers on obstacle planning and review the plan before execution.

相反的，當工兵參謀尚未於作戰地區內結合地形設置阻絕時，可利用作戰地區縱深的優勢去干擾敵軍機動。失敗的阻絕設置計畫有許多不同的原因，但通常多是因為工兵參謀缺乏專業知識及自身經驗不足所導致的錯誤配置。在某期的多國聯合戰備中心案例，甲軍指揮官的企圖要阻止敵軍最大可能接近路線並干擾其他接近路線，指派任務部隊執行帶狀防禦，但工兵參謀並未明確律定由旅級或是任務部隊執行，最後由工兵排和其他兵科排長們自行規畫設置，導致阻絕設置距離相隔500公尺，乙軍最後快速的通過了阻絕地帶。工兵參謀必須要審慎擬定阻絕設置組成及配置來支持戰鬥部隊指揮官決心，並且要採縱深配置。聯兵旅內資深的工兵參謀必須要時時教育和指導其他工兵參謀及幹部阻絕設置之要領，並於阻絕計畫頒布執行前預先審核。

A great plan that precisely supports the maneuver commander's plan, is integrated with fires and existing obstacles, and covers the depth of the operating area will be ineffective unless it is resourced and synchronized. Ensuring that the barrier materials and explosives required for obstacle construction are available and delivered to centralized locations is critical to obstacle employment. Unit standard operating procedures outlining obstacle designs allow for the development of combat-configured loads of these materials. Combat-configured loads streamline the process of forecasting and delivering resources supporting an obstacle plan. The observation of recent trends at the JMRC indicate that units do not understand and use the combat-configured load concept for resourcing obstacles. These units habitually fail to emplace obstacles in depth because the required materials are not readily available to the emplacing unit. Additionally, units do not take the time during the course of action analysis or combined arms and sustainment rehearsals to synchronize the delivery of obstacle materials with the emplacing units. This also leads to the failure of units to employ obstacles in depth.

一個好的能夠精準支持戰鬥部隊指揮官企圖的防禦計劃必須是要以現有障礙物涵蓋作戰區域並結合地形及火力運用，但最重要的前提是必須整合所有資源。阻絕設置的關鍵是確保資阻材及爆材數量充足並能夠送達指定集中區域。單位的標準作業程序發展著重在於阻材戰鬥裝載。阻材戰鬥裝載標準作業程序能更有效率地預判資阻材並運送以支持阻絕計畫。多國聯合戰備中心近期觀察指出單位皆不熟稔如何運用阻材戰鬥裝載的概念來補給，而這些不懂運用的單位往往無法於完成阻絕縱深配置因為並未將所需之資阻材全數送達。而且，這些單位並未利用在軍事決心策定程序的行動方案分析或聯兵旅及後勤補給兵推時間與設置單位協調。以上都是導致任務失敗的態樣。

Employ for Surprise

Tactical surprise on the battlefield is difficult to achieve with the increase in ISR technologies and even harder to achieve when proven capabilities are no longer available. Obstacle plans designed to surprise the enemy give the maneuver commander regarding how, when, and where effects are brought to bear on the enemy. Scatterable mine capabilities can easily create countermobility effects triggered by the commander's decision points, but other obstacle methods may be used to create an uncertain mobility picture for the enemy. Current countermobility capabilities require engineer planners to apply imagination and ingenuity to achieve surprise with the obstacle plan.

奇襲設置

奇襲設置在情監偵科技發達的現代戰場是相當難以達成的任務了。阻絕設置計畫便是要讓戰鬥部隊指揮官能夠彈性於何時、何地運用兵力去抵禦來犯之敵。不規則雷帶可以由指揮官決心點下達來控制，以發揮出奇的反機動效果。但是其他的障礙物設置可以用來擾亂敵機動路線計畫。現今的反機動計畫必須要工兵參謀官發揮想像力及創造力去規劃，以收奇襲之效。

Considerations for employing obstacles for the element of surprise include—

- Obstacle intent.
- Triggers.
- Emplacement speed.
- Duration.
- Detectability.
- Predictability.

障礙物設置要達奇襲之效必須包括以下條件—

- 障礙物設置意圖
- 觸發行動
- 設置速度
- 週期
- 被偵測度
- 被預測度

Obstacle intent is part of the obstacle planning process; however, the components of target, effect, and relative location can be used to create uncertainty with the enemy. Each obstacle should be emplaced with the intent to affect a specific element of the enemy force. For instance, the enemy force may organize into reconnaissance, advanced guard, and main body formations, with the intent to affect the main body. The reconnaissance and advanced guard formations may pass through a planned obstacle area, which is then triggered to affect the main body of the enemy. The main body may not expect to encounter an obstacle in that area if recent reports indicated that the area was free of obstacles. Additionally, the obstacle can generate surprise and uncertainty with the enemy formation if the obstacle effect is outside of the doctrinal application. This may cause enemy commanders to assess the perceived situation and change their course of action, thus disrupting operations. Finally, surprise may be generated if the obstacle is emplaced in an area that is not commonly restricted or in terrain that is capable of masking the obstacle, such as a wooded reverse slope.

障礙物設置意圖是阻絕設置的一部分，然而依據目標、影響程度和週邊地形環境的不同，也可使敵產生不確定性。每個障礙物設置必須要有它的意義和標的。舉例來說，敵行軍序列可能依序是偵查部隊，前衛和本隊。若目標是在本隊，便會讓偵查部隊和前衛先行通過阻絕設置區，如此一來本隊不會預判將遇到阻絕障礙，因為最新情資指出前方地區是安全可通行的；此外，爆破物設置可收奇襲之效並使敵編隊混亂，因為爆破物造成的影響並未涵蓋於準則運用的範疇，而且將會迫使敵指揮官必須重新評估現況並變更行動方案，以達到干擾作戰之效。最後，奇襲設置可採不規則設置或利用地形地貌來偽裝，例如樹林地帶的反斜坡。

Carefully planned obstacles that make use of triggers, maximum emplacement speed, and variable duration create a dynamic situation for the enemy. The use of triggers with scatterable mines and demolition obstacles allows the commander to affect a specific formation and requires fewer resources than simply emplacing obstacles along all possible avenues of

approach. Individual obstacles and multiple obstacle groups may be planned, but may not be emplaced until a specific condition is met, thus increasing the uncertainty of the enemy force. Maximizing the emplacement speed of obstacles minimizes the enemy reaction time once the obstacle is emplaced. Once emplaced, varying the obstacle duration forces the enemy to actively respond to the emplaced obstacle. During one recent JMRC rotation, a brigade combat team employed a short-duration, remote, antiarmor minefield that effectively blocked the primary avenue of approach to the OPFOR objective. The obstacle was identified during emplacement; and because the OPFOR commander understood that it was unlikely that anything other than a short-duration mine would be emplaced, he adjusted his execution time by 4 hours. Once the minefield began to self-destruct, the OPFOR commander rapidly pushed a mechanized company team through the area without effect. If obstacle duration times had been varied, the OPFOR commander would have sent the company through a mined area or been forced to adjust his plan.

細心策畫的阻絕計畫會運用特定觸發狀況、快速設置和定時引爆的雷區來使敵疲於奔命。運用特定觸發狀況起爆的雷區或爆裂物可使戰鬥部隊指揮官影響敵特定序列，而且只需要於敵可能接近路線上消耗少數戰鬥資源。敵軍於排雷時，會初步假設是單一雷區或數個雷區所組成，但在還沒有找出規則以前是無法判定的，這將會造成敵軍相當大的不確定性。而阻絕設置速度愈快，愈會縮短敵的反應時間。一當設置了不同週期的自主起爆雷區，將會迫使敵軍疲於反應及反制。近期在多國聯合戰備中心的例子，甲旅設置了一座短週期、可遙控起爆的反坦克雷區，要阻擋乙旅經由主要接近路線佔領重要目標。乙旅指揮官在甲旅設置雷區期間已經掌握情資並精準研判是座短週期自主引爆雷區，指示任務行動延後4小時。當甲旅設置的雷區開始自主起爆後，乙旅指揮官立刻下令裝騎連迅速通過而毫髮無傷。但如果這座雷區自主起爆時間被甲旅變更，乙旅指揮官便很有可能將部隊送進雷區或迫於調整作戰計畫。

Conclusion

Conducting countermobility operations in a complex world against a near-peer adversary requires the engineer planner to fully understand and use all planning tools at his disposal. Recent JMRC rotations demonstrate that many units do not understand, and are not ready to successfully execute, combined arms obstacle integration operations against a near-peer threat. This trend is worrisome, considering the increase in hostilities in Eastern Europe from a near-peer adversary with a tremendous ability to rapidly maneuver and occupy advantageous terrain. The five obstacle employment principles provide engineer planners with a framework to develop unique solutions to deny the enemy the ability to maneuver or occupy advantageous terrain with the limited countermobility capability currently available to the force. To reverse the trend, engineer leaders must educate themselves on these principles and use them during the planning processes for all operations—not just for defensive operations.

結語

在複雜的現代戰場要能執行反機動任務抵抗實力相當的敵軍，需要一位具有專業本職學能及相當瞭解計畫作為的工兵參謀。近期在多國聯合戰備中心的演訓裡，許多單位皆不瞭解而且未能充分整合並發揮兵種協同防禦作戰的概念來對抗實力相當的敵軍。這樣的情形是很令人擔憂的，尤其是在面對著強大能力且能夠快速機動搶佔地形要點的假想敵和東歐逐漸升溫的威脅。這阻絕設置五項原則是提供工兵幹部一個架構去發展本身的應變方案，如何用最少的反機動資阻材和部隊去阻止敵機動或先期佔領地形要點。要阻止這向下沉淪的趨勢，工兵幹部必須自我充實本職學能，並將準則活用於所有作戰行動——而不是只有在防禦作為上。