

Engineered Success By 1LT Christopher Ploch

成功的工兵支援案例 作者：1LT Christopher Ploch

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Imagine this: you are a new Second Lieutenant and the Battalion Commander selected you to lead a platoon. Your first task as their Platoon Leader is to train and lead them to fight in the hills of Southern Germany. It's September. The upcoming battles will be in the middle of the rainy season. Your Brigade fights alongside several multinational partners; many of which do not speak English or have different communication platforms; all of which share the same end state in defeating the enemy. You hope that your limited training will somehow make up for your lack of experience and prepare you for any difficult situation. While it is easy to associate this scenario to the fall of 1944, many young lieutenants faced a similar experience in September 2022, attending 7th Army Training Command's (ATC) Saber Junction exercise held in Hohenfels Training Area (HTA), Germany. The purpose of this article is to outline my experiences attending Saber Junction '22 as a Sapper Platoon Leader in the 54th Brigade Engineer Battalion (BEB), 173rd Infantry Brigade Combat Team (Airborne) (IBCT(A)), and to identify several lessons for Maneuver and attached Maneuver Support leaders. More specifically, this article aims to argue that logistical planning, a mutual understanding of mission requirements and assets, and Maneuver Support empowerment were key to our success as an Operational Control (OPCON) Sapper Platoon in a Squadron area defense.

想像一下：身為一位新來的少尉，營長選派你帶領一個排。作為排長，你的第一個任務是訓練並帶領他們到德國南部山區作戰。現在時間是九月，即將到來的戰鬥正值雨季之中。您所在的步兵旅將與多個跨國夥伴並肩作戰；其中許多人不會說英語，或擁有不同的通訊平台；但這些人都以打敗敵軍為最終目標。你希望那些有限的訓練能有效彌補本身經驗上的不足，以讓你做好應對任何困難情況的準備。雖然這種情況很容易讓人聯想到 1944 年秋天，許多年輕的尉級軍官在 2022 年 9 月參加第 7 陸軍訓練司令部的軍刀交會演習(Saber Junction)、舉行地點在德國霍恩費爾斯訓練區 (HTA)。本文旨在概述我作為第 173 步兵旅戰鬥隊 (空降兵) (IBCT(A)) 第 54 旅工兵營 (BEB) 的一名工兵排長參加 2022 年軍刀交會演習(Saber Junction)的經歷，並為戰鬥和戰鬥支援部隊的領導者指出幾個經驗教訓。更具體來說，本文旨在彰顯後勤計畫、任務要求及所擁有資源的了解，以及機動支援權限是我們戰鬥工兵排在作戰管制 (OPCON) 下於中隊區域防禦中取得成功的關鍵。

My Sapper Platoon consisted of 17x Paratroopers. Due to our personnel shortage, we split the platoon into two squads, with each squad owning two High Mobility Multipurpose Wheeled Vehicles (HMMWVs), a M-240B, and either an AT-4 or Javelin. The two Light Equipment (LE) Platoons in the Battalion loaned us four High Mobility Engineer Excavators (HMEEs), which are construction loaders/back-hoes used primarily for constructing survivability positions in the defense. I decided to split these HMEEs between the two squads as well. With all of these light capabilities considered, the Battalion Commander tasked my 17 Paratroopers and me to provide countermobility support to the entirety of 1st Squadron, 91st Cavalry Regiment (1-91 CAV), the Brigade's Cavalry Squadron. Prior to our initial Ground Assault Convoy (GAC), the Brigade Headquarters published the Commander's Intent to "sling wire everywhere."

This focus on disrupting our primarily-mounted enemy empowered small teams to accomplish their overall missions in the defense with limited resources and manpower. As the forward recon element, 1-91 CAV controlled an Area of Operation (AO) that was approximately 34 km². Successfully covering this size AO with wire obstacles in relation to the time constraints was no small task.

我所在的工兵排由 17 名傘兵組成。由於人員短缺，我們將全排分成兩個班，每個班級擁有兩輛高機動性多功能工兵車 (HMMWV)、一輛配有 M-240B 機槍和一輛配有 AT-4 反戰車火箭筒或標槍飛彈。營裡的兩個輕型裝備 (LE) 排借給我們四輛高機動工程挖土機 (HMEE)，這是一種在防禦中主要用於構築陣地，前側裝載、後方挖掘的機具。我決定將這些高機動工程挖土機也分給兩個班級使用。考慮到這些所有輕型裝備能力，營長命令我和我的 17 名傘兵為第 91 騎兵團第 1 中隊 (1-91 CAV) 提供反機動支援。在我們最初的地面突擊車隊 (GAC) 出發前，旅級下達了要將該地區佈滿鐵絲網的指揮官意圖。

這種專注於擾亂以騎兵為主的敵人的做法使小分隊有能力在資源和人力有限的情況下完成整體防禦任務。作為前線偵察部隊，第 91 騎兵團第 1 中隊控制約 34 平方公里作戰地區 (AO)。在時間緊迫的情況下，要在如此大面積的作戰地區上成功覆蓋鐵絲網，這可不是一項簡單的任務。

Of the seven chapters in Field Manual (FM) 3-34 "Engineer Operations," two are solely dedicated to "Engineer Planning" and "Sustainment Considerations." Our doctrine acknowledges these two topics as essential to Engineer Operations. With this in mind, it is no surprise that deliberate logistical planning was a large contributor to my platoon's success. Building and communicating predetermined Combat Configured Load (CCL) drop locations was essential to supplementing the limited amount of CLIV (construction materials) my platoon could carry in our HMMWVs and HMEEs. We planned these CCL drop locations to be in the treelined under overhead concealment and separated from key terrain features or intersections.

The overhead concealment prevented its identification by enemy Unmanned Aerial Surveillance (UAS) and its destruction by enemy Indirect Fire (IDF). This allowed the unit commanders to assume the risk of leaving the CCLs unattended. After creating these drop points, communication became the most essential piece to ensure logistical success. I communicated with the Squadron Logistics Officer (S4), Forward Support Troop (FST), and Troop Leadership to ensure all interested parties understood the CCL drop locations via a 10-digit grid location and a short description. These well-planned and well-understood logistical supply points offered the Squadron a more expedient method for my Sapper Platoon and for the Troops to resupply their CLIV. In an area defense with a detailed timeline, this convenience allowed my platoon to dedicate more of our time to obstacle emplacement. Without this convenience, we would otherwise use that time to coordinate a resupply from the FST and organically transport the CLIV Army Doctrine Publication (ADP) 6-0 "Mission Command" defines its namesake as "the Army's approach to command and control that enables unified and operations."

在《野戰手冊》(FM) 3-34 "工兵作戰"的第七章中，有兩章專門討論 "工兵計畫"和"後勤持續判斷"。我們的準則認為這兩個主題對工兵作戰至關重要。有鑑於此，嚴謹的後勤計畫是我工兵排成功的重要因素。為了補充我工兵排在高機動性多功能工兵車和高機動工程挖土機中攜帶的有限的 CLIV (阻材)，建立和溝通預先確定的戰鬥攜行量(CCL)投擲地點則至關重要。我們計劃將戰鬥攜行量(CCL)的投放地點安排在隱蔽的樹叢中，並與主要地形特徵或交叉路口分離。

上空的隱蔽性使其無法被敵方無人機偵察系統(UAS)進行識別，及使用敵方曲射火力(IDF)進行摧毀。這使得部隊指揮官可以承擔讓戰鬥攜行量(CCLs)無人看管的風險。建立這些投放點後，通信成為確保後勤成功的最重要一環。我與中隊後勤官 (S4)、前方支援部隊(FST)和部隊長進行溝通，確保所有相關單位都能透過 10 位數網格位置和簡短描述了解補給品的投放位置。這些經過周密計劃和充分了解的後勤補給點為中隊提供了一種更為便捷的方法，使我的工兵排和部隊能夠為他們的資阻材(CLIV)進行再補給。在有詳細時序表的區域防禦中，這種便利讓我的工兵排可以將更多的時間用於設置障礙。如果沒有這種便利，我們就會利用這段時間協調前方支援部隊(FST)的再補給，並有組織地運輸資阻材(CLIV)陸軍理論出版物 (ADP) 6-0 "任務式指揮" 將其命名為 "陸軍的指揮和控制方法，以實現統一和行動"。

The doctrine then outlines shared understanding as one of the seven principles of Mission Command. With Bulldog Troop, 1-91 CAV, this concept was key to our success. During our initial meeting at their Company Command Post (CP), we first discussed Bulldog's common operating picture and mission. Second, we discussed the capabilities and assets my Sappers brought the fight. These two topics, albeit simple, provided the foundation for the successful implementation of a Maneuver Support element. As soon as we arrived, my Non-Commissioned Officers (NCOs) and I understood the Troop Commander's current disposition and his intent for the area defense. In turn, we ensured he understood how we could most effectively enable him to accomplish that intent.

To provide an example: the Troop Commander showed me a corridor on the map that represented a key weakness in his defensive plan. If the enemy penetrated that corridor, they would have had access to a multitude of side trails leading to each of his scouts' defensive positions. I outlined the resources and obstacles we had available to provide a blocking effect along that corridor, to include Selectable Lightweight Attack Munitions (SLAMs), Concertina Wire (C-Wire), and Anti-Vehicular Ditches (AVDs). I explained the specifics for their individual employment. SLAMs offer versatility through bottom-attack, side-attack, timed demolition, and command detonation options, as outlined in TM (Training Manual) 3-34.85, pages 7-16. They also offer seven self-destruct time selections ranging from 15 minutes to 24 hours.

The C-Wire accomplishes different obstacle effects depending upon its emplacement. An Eleven-Row C-Wire obstacle can block a tank on its own, but requires a significant amount of C-Wire, pickets, and barbed wire.

隨後，該理論將共同理解概述為任務式指揮的七項原則之一。對於第 91 騎兵團第 1 中隊的鬥牛犬部隊來說，這個理念是我們成功的關鍵。我們在連指揮所 (CP) 初次見面時，首先討論了「鬥牛犬」的共同行動圖像和任務。其次，我們討論了我的工兵隊員為戰鬥帶來的能力和資源。這兩個主題雖然簡單，卻成功為實施戰鬥支援部隊奠定了基礎。我們一到，我和我的士官們就了解部隊指揮官目前的部署情況以及他對該地區防禦的意圖。反過來，我們也確保他了解我們如何才能最有效地幫助使他實現這一意圖。

舉個例子：部隊指揮官向我展示了地圖上的一條走廊，這是他防禦計畫中的關鍵弱點。如果敵人穿越了這條走廊，他們就可以利用這條走廊通往每個偵察兵防禦陣地的眾多小路。我概述了我們可用資源和障礙物來沿著走廊提供阻止效果。包括可選輕型攻擊彈藥 (SLAMs)、蛇腹型鐵絲網 (C-Wire) 和防戰車壕 (AVDs)。我解釋了它們各自的具體使用方法。如《訓練手冊》(TM) 3-34.85 第 7-16 頁所述，輕型攻擊爆藥 (SLAMs) 透過底部攻擊、側面攻擊、定時爆破和指令引爆等方式提供多功能性。它們還提供七種自毀時間選擇，從 15 分鐘到 24 小時不等。

蛇腹型鐵絲網 (C-Wire) 依其配置位置的不同，可以達到不同的障礙效果。十一列蛇腹型鐵絲網本身可以阻擋戰車，但需要大量的蛇腹型鐵絲網、樁和刺絲。

Meanwhile, a Double Helix or Triple Standard C-Wire (TSC) obstacle can supplement a minefield or AVD to achieve a blocking effect and requires much less CLIV. The HMEE operators may construct triangular or rectangular AVDs in accordance with ATP (Army Training Publication) 3-90.8, pages C-2 and C-3. While rectangular AVDs are more effective as a blocking obstacle, they do require more time and fuel to emplace. After briefing the Troop Commander on these capabilities, I finished by offering my recommendation to emplace a SLAM bottom-attack minefield with a 24-hour self-destruct time supplemented by Double Helix C-Wire. In total, this conversation took 15 minutes, at a maximum, but its effects on a shared understanding and overall mission success were immense.

The last key to the successful implementation of my Sapper Platoon into 1-91 CAV was our empowerment by the Troop Commanders. To continue on the Bulldog Troop anecdote, our mutual understanding laid the foundation for this empowerment because of the confidence it built. At that point in time, my platoon understood the Troop Commander's detailed defensive plan, to include the planned obstacle effects throughout the AO. Simultaneously, the Commander understood our assets and capabilities and gained confidence in our expertise based on our recommendations.

同時，"雙列"或"三疊式蛇腹型鐵絲網" (TSC) 障礙物可結合雷區或防戰車壕 (AVD)，以達到阻止效果，而且可大幅減少所需阻材數量。高機動工程挖土機(HMEE)操作手可根據 ATP (陸軍訓練出版物) 3-90.8 第 C-2 和 C-3 頁的規定建造挖掘出三角壕或梯型壕。雖然梯型壕作為阻止障礙物更為有效，但它們確實需要更多的時間和油料來設置。在向部隊指揮官介紹了這些能力後，我最後建議佈設一個輕型攻擊爆藥(SLAM)底部攻擊雷區，自毀時間為 24 小時，並輔以雙列蛇腹型鐵絲網。這次談話總共最多花 15 分鐘，但它對達成共識和任務的整體成功產生了巨大的影響。

我的工兵排成功加入第 91 騎兵團第 1 中隊的最後一個關鍵是部隊指揮官對我們的授權。繼續鬥牛犬部隊的軼事，我們之間的相互理解為這種授權奠定了基礎，因為它建立了信任。當時，我的工兵排了解部隊指揮官的詳細防禦計劃，包括整個作戰地區規劃的障礙效果。同時，指揮官也了解我們的資源和能力，並根據我們的建議對我們的專業知識充滿信心。

From that point on, his standing orders were to generally emplace obstacles throughout the AO according to his intent; he delegated the specifics to us unless they required his support. Because of this empowerment, my Sappers and I were able to work uninterrupted on our obstacle emplacements and completed multiple obstacle belts before needing to return to the CP for a resupply or further guidance. By the end of the defensive phase of Saber Junction, 1-91 CAV had emplaced all available C-Wire, mostly because of the time saved by the Troop Commanders' trust in our abilities and our understanding of their mission plans. Our empowerment may have been relatively small in its intention, but it was enormous in its effect. While one of my squads and I were working with Bulldog Troop, my other squad and Platoon Sergeant worked with Comanche Troop. Nevertheless, the same principles contributed to their measured success in Comanche's AO. The time afforded to them by the CCL drop locations, their understanding of the defensive plan, and their empowerment to achieve the intent produced results. Within this AO, the squad built a complex obstacle comprised of an AVD and TSC. This obstacle blocked a Battalion-sized enemy armored column attempting to move north. This block forced the column, consisting of over 30 tracked vehicles, to move southeast directly into 2nd Battalion, 503rd Infantry Regiment's (2-503 IN) primary engagement area. In this situation, the same conditions and principles yielded the same quantifiable results.

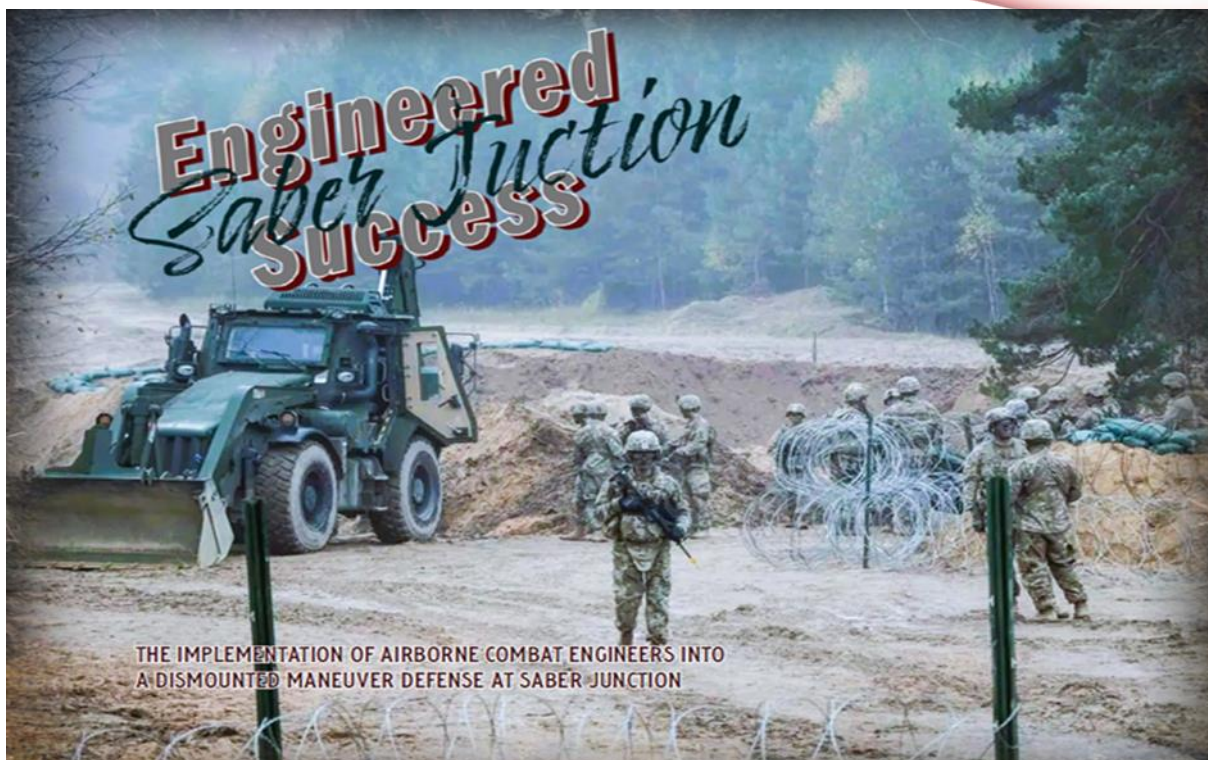
從那時起，他的現行規定就是按照他的意圖在整個作戰地區設置障礙；除非需要他的支援，否則他將具體工作交給我們。由於有了這種授權，我和我的工兵隊員們能夠不間斷地進行障礙物設置作業，並在需要返回指揮中心獲得補給或進一步指導之前完成了多個障礙帶的設置工作。在軍刀交會演習(Saber Junction)防禦階段結束時，第 91 騎兵團第 1 中隊已佈設了所有可用的蛇腹型鐵絲網，這主要是因為部隊指揮官相信我們的能力並了解他們的任務計劃，從而節省了時間。我們接受的權力在本意上可能相對微小，但在效果上卻有發揮巨大的作用。當我和我的一個班在鬥牛犬部隊工作時，我的另一個班和副排長在科曼奇部隊工作。儘管如此，同樣的原則使他們在科曼奇的作戰地區取得了一定的成功。戰鬥攜行量(CCL)空投地點為他們提供的時間、他們對防禦計畫的理解以及他們實現意圖的能力都產生了效果。在這一作戰地區內，小分隊建造了一個由防戰車壕(AVD)和三疊式蛇腹型鐵絲網(TSC)組成的複合式障礙物。這個障礙物阻擋了一個裝甲營的敵人試圖向北縱隊移動。這項障礙迫使 30 多輛履帶車組成的裝甲縱隊向東南方向移動，直接進入第 503 步兵團第 2 營(2-503 IN)的主要接戰地區。在這種情況下，同樣的條件和原則產生了相同的可量化結果。

By the end of our time at Saber Junction, my Sapper Platoon had successfully implemented ourselves into 1-91 CAV's area defense. Through a detailed and well-communicated logistical plan, a shared understanding of mission plans and capabilities, and our empowerment by the Troop Commanders, 18 Airborne Sappers enabled the Calvary Squadron to accomplish their mission. Ultimately, we achieved the Brigade Commander's intent to "sling wire everywhere." My hope is that Maneuver and Maneuver Support leaders take these three key lessons and apply them to their next training rotation or field problem. Engineers and other Maneuver Support elements are combat multipliers for a reason; support them logistically, understand their capabilities, and empower them to maximize combat effectiveness.

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在軍刀交會演習 (Saber Junction) 的日子結束時，我的工兵排已經成功地將自己融入第 91 騎兵團第 1 中隊的區域防禦中。18 名空降兵制定了詳細、溝通良好的後勤計劃，對任務計劃和能力有了共同的認識，部隊指揮官也賦予了我們權力，從而使加略山中隊得以完成任務。最終，我們實現了旅長設滿鐵絲網的意圖。我希望，戰鬥和戰鬥支援部隊的領導者能吸取這三個關鍵教訓，並將其應用到下一次輪訓或戰場問題中。工兵和其他戰鬥支援人員為戰鬥力倍增發揮貢獻；從後勤上支持他們，了解他們的能力、並最大化提升他們的戰場貢獻。

Christopher Ploch 中尉在位於義大利維琴察的第 173 步兵旅戰鬥隊（空降）第 54 旅工兵營擔任工兵排長。他擁有美國軍事學院數學科學學士學位。軍事學院數學科學學士學位。



The Implementation of Airborne Combat Engineers into a Dismounted Maneuver Defense at Saber Junction 173rd IBCT(A) Paratroopers build protective concertina wire obstacles next to a HMEC. Photo by LTC John Hall, November 2017.

空降戰鬥工兵在軍刀交會演習(Saber Junction)實施徒步機動防禦

*Saber Junction 為美軍於非洲的一個聯合作戰訓練演習，類似於北方打擊第 173 步兵旅戰鬥隊(A)傘兵在高機動工程挖土機(HMEC)旁建造防護型蛇腹形鐵絲網障礙。照片由 John Hall 中校拍攝，2017 年 11 月。



Paratroopers emplace the third strand of concertina wire on a Triple Standard Concertina wire (TSC) obstacle. Photo by LTC John Hall, November 2017.

傘兵在三疊式蛇腹形鐵絲網(TSC)障礙上安置第三股蛇腹形鐵絲網。照片由 John Hall 中校拍攝，2017 年 11 月。



Paratroopers prepare to unravel a strand of concertina wire in front of a HMEC. Photo by LTC John Hall, November 2017.

傘兵準備在多功能工兵車 前解開一股蛇腹形鐵絲網。照片由 John Hall 中校拍攝，2017 年 11 月。