印太地區與多領域作戰概念

The Indo-Asia Pacific and the Multi-Domain Battle Concept

譯者簡介

黃文啟上校，陸軍官校正61期、陸軍指參學院96年班、美國陸軍戰爭學院100年班、蒙特瑞國際學院口筆譯碩士2005年班；曾任官校大隊長、總部、國防部參謀、聯兵旅參謀主任，現任陸軍司令部計畫處建軍組組長。

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The United States Armed Forces are at a crossroads, facing both institutional and operational challenges. The character of war continues to change at a quick pace, requiring military leaders to reassess some of their core beliefs. This situation has led to the testing and refinement of concepts, capabilities, and people to ensure U.S. forces are ready for the conflicts of today and tomorrow. Without doubt, any future conflict will be increasingly complex and distributed, involving actions across multiple domains-land, air, sea, space, and cyber-by multiple military services, at times simultaneously (see figure).[1] The nascent multi-domain battle concept, some elements of which are described in a forthcoming white paper

1 基蒙斯(Sean Kimmons)著，「未來戰場將在多重領域進行之高階幹部觀點」，Army.mil, https://www.army.mil/article/176230/new_multi_domain_battle_concept_to_drive_change_in_armys_future, 5 October 2016.

jointly authored by the Army and the Marine Corps, addresses the increasing complexity of the battlefield and its requirement for service integration.[2] While still in development and experimentation, the concept is already affecting operational and resource decisions, especially in the Indo-Asia Pacific.

今日美國三軍已走到十字路口，同時面對各種制度面與作戰面的挑戰。戰爭特質不斷快速改變，使各級軍事領袖必須重新評估其部分核心信念。此種情況導致各種概念、戰力與人員方面的驗證與精進，期藉此確保美軍部隊能做好因應當前與未來衝突的準備。無疑地，未來任何衝突都將日趨複雜而分散，涉及到多個軍種在多個不同領域的行動－地面、空中、海上、太空和網路等－有時甚至會同步進行。[1]最新提出的多領域作戰概念，部分要件已經在陸軍與海軍陸戰隊共同授權即將公布(譯註：譯作時已公布)的白皮書中有所說明，其內容探討戰場複雜性與軍種整合之需求。[2]此一概念雖然仍在發展與驗證階段，然卻已開始影響某些作戰與資源分配決策，尤其在「印太地區」更是如此。

This article presents three topics to illustrate how we are thinking about the implementation of the multi-domain battle concept in the Pacific Command area of responsibility. First, it briefly discusses the strategic situation in the Indo-Asia Pacific, which typifies the need for a new operating concept to integrate all the United States Armed Forces. Next, it describes the multi-domain battle concept, including the three elements that help define its desired effects: joint integration, technology, and people. Finally, it presents a vignette of multi-domain battle as it might apply at the tactical level.

本文將以三大主題說明吾人對於落實太平洋司令部責任地境內多領域作戰概念的思維。首先，內容將簡要地探討印太地區的戰略形勢，說明如何以某種新作戰概念整合所有美國三軍的必要條件。其次，闡述多領域作戰概念，包含用於界定其所望效果的三大要件：分別為「聯戰整合」、「科技」和「人員」。最後，以一項多領域作戰的範例，說明該概念在戰術層級的運用。

The Strategic Context in the Indo-Asia Pacific

Given that the international state of play in this region is more tenuous than ever, the

2 柏金斯(David G. Perkins)著，「多領域作戰：21世紀聯合兵種作戰」，美國陸軍協會，https://www.ausa.org/articles/multi-domain-battle-joint-combined-arms-concept-21st-century, 2016年11月11日.

multi-domain battle concept is sorely needed. The region contains thirty-six countries in sixteen time zones, more than half the world's population, and twenty-four of the thirty-six megacities on Earth, and it covers more than half the world's surface area.[3] The region contains three of the world's largest economies, seven of the largest militaries, and five of the United States' seven mutual defense agreement partners.[4] According to Adm. Harry B. Harris Jr., commander of United States Pacific Command, "approximately $5.3 trillion in annual global trade relies on unimpeded access to sea lanes [such as those in the Straits of Malacca and the South China Sea, and] $1.2 trillion of this sea-based trade destined to, or exported from, the United States."[5] Additionally, "the Strait of Malacca alone sees more than 25 percent of oil shipments and 50 percent of all natural gas transits each day."[6] In addition, the area is disaster-prone, with its typhoons, earthquakes, volcanoes, tsunamis, and other events representing "over 60 percent of the world's natural disasters."[7] In short, global prosperity hinges on the stability and security of this vast and complex region.

印太地區的戰略背景

由於本地區的國際當前情勢遠比過去動盪，更顯多領域作戰概念的迫切性。印太地區涵蓋16個時區內的36個國家，擁有全世界半數以上人口，以及全球36個超級城市中的24個，同時更占有大半的地表面積。[3]區域中有世界3個最大的經濟體、7個最大的軍隊，以及與美國有共同防禦條約7個夥伴中的5個。[4]就美國太平洋司令部司令哈里斯上將表示，「近5.3兆年度全球貿易繫於海上通道(諸如麻六甲海峽和南海等水道)的暢行無阻，而此一海上貿易量中有1.2兆是前往，或來自美國」。[5]此外，「僅只麻六甲海峽一處每天就有全世界25%的原油和50%的天然氣運送通過」。[6]不僅如此，本地區災害頻仍，

3 太平洋司令部，「太平洋司令部責任地境」，http://www.pacom.mil/About-USPACOM/USPACOM-Area-of-Responsibility.

4 美國有線電視「錢線」節目，「世界最大經濟體」，http://money.cnn.com/news/economy/world_economies_gdp/.

5 哈里斯(Harry B. Harris Jr.)著，「地面部隊在確保共有領域使用管道之角色」(2016年5月25日於檀香山美國陸軍地面戰研究中心太平洋地面戰論壇演說)，http://www.pacom.mil/Media/Speeches-Testimony/Article/781889/lanpac-symposium-2016-role-of-land-forces-in-ensuring-access-to-shared-domains/.

6 哈里斯，「哈里斯上將2015年7月於亞斯平安全論壇演說」，http://www.pacom.mil/Media/Speeches-Testimony/Article/610925/aspen-security-forum-remarks-by-adm-harris/.

7 摩諾妮(Jennifer D. P.Moroney)等人著，「國防部亞太地區救災作為經驗教訓」(Santa Monica, CA: RAND, 2013), p.1.

包含颱風、地震、火山爆發、海嘯及其他狀況等「占全世界天然災害的60%以上」。[7]簡言之，全球繁榮端賴於此一廣大而複雜地區的穩定和安全。

These demographic and economic dynamics interact with the increased rate of technological change to add to the political and military complexity found in the Indo-Asia Pacific. Dramatic technological shifts created by unmanned capabilities, robotic learning, artificial intelligence, nanotech, biotech, and big data are only expanding military competition between geopolitical rivals. Much of these new technological tools depend on the use of digital connectivity-with seven billion devices being connected to the Internet in 2016 and a projected fifty billion by 2020-only increasing the already dangerous situation in cyberspace and its dependence on space assets for connectivity.[8]

這些人口和經濟變動因素與科技變化不斷加速的互動之下，更加深印太地區的政治與軍事複雜性。無人戰力、機器學習、人工智慧、奈米科技、生物科技和大數據等衍生之劇烈科技改變，更加深了地緣政治敵對力量間的軍事競爭。這些新科技工具大多須依賴數位鏈結的使用－2016年全世界就有70億裝置透過網際網路進行鏈結，預期到2020年更將達到150億－則導致網路空間危險情勢及網路在鏈結上依賴太空資產的程度更形提高。[8]

Technological shifts are also feeding and increasing security challenges in the Indo-Asia Pacific, with some the world's most intractable problems among them. Challenges include an increasingly belligerent North Korea that is sharing its increasingly capable missile technology with Iran, a growing China that is challenging international rules and norms, a revanchist Russia that is increasingly active in the Pacific with a provocative military posture, continuing nuclear-backed friction between India and Pakistan, increasing activities by violent extremist networks operating in partner and ally nations, and political and diplomatic instability from changes in executive leadership of key regional allies and partners. The most dangerous threat in the Indo-Asia Pacific comes from regional actors with nuclear arsenals and the intent to undermine the international order. Sophisticated denial capabilities and less-than-military forces managed by the state but backed by large militaries with interior lines of communication create the danger of faits accomplis.

科技轉變也讓印太地區的安全挑戰不斷增加與擴大，其中有部分還是世界最棘手的

8　辛格爾(Peter Singer)，太平洋司令部主官會議2016年10月13日提報資料。

問題。相關挑戰包含更加好戰的北韓將其日益強大的飛彈科技和伊朗分享，日漸強大的中共挑戰國際規則與規範，捲土重來的俄羅斯以挑釁的軍事部署在太平洋地區日趨活躍，印度與巴基斯坦恃其核武持續摩擦行為、在夥伴國與盟邦境內運作的暴力極端網路活動頻繁、以及重要區域盟國和夥伴國領導高層更迭所帶來的政治與外交動盪等。印太地區最危險的威脅來自於那些擁有核武且試圖破壞國際秩序的國家。由此種國家掌握的精密拒止戰力和準軍事力量，在龐大軍隊支持下，運用內部交通線優勢製造既成事實的危險。

Like the international state of play, the military situation is also increasingly dangerous. Adversaries and enemies have learned from U.S. successes and failures over the last few decades. They recognize that U.S. strengths based on power projection, joint operations, and technological overmatch led to unprecedented tactical success. As such, adversaries have developed capabilities and concepts that attempt to remove those advantages, increasing the complexity of the battlefield for the United States Armed Forces. This has led to an increasingly contested global commons, with a loss of U.S. military dominance in the air and sea due to denial technologies and tactics. Whether opponents take gradual or sudden actions, the United States needs to significantly improve its strategic advantage in the Indo-Asia Pacific, or it will risk losing ground militarily, diplomatically, and economically.

一如國際當前局勢般，軍事形勢也日趨危險。諸多對手和敵人從美國在過去數十年的成敗中學到了教訓。他們深悉美國的優勢在於兵力投射、聯合作戰和科技領先所創造之空前戰術成果。因此，對手們發展出各種用於消除這些優勢的戰力和概念，更增美國三軍在未來戰場上之複雜性。此種情況導致全球共有領域的角力不斷擴大，拒止科技和戰術使得美軍喪失空中與海上的絕對優勢。不論對手採取漸進或猝然行動，美國都有必要大幅強化其在印太地區的戰略優勢，否則將面臨在軍事上、外交上和經濟上一敗塗地的風險。

Because of these strategic trends, both positive and negative, U.S. and partner forces need to maintain current military advantages and recapture those that have been lost. Reducing the risk of conflict and ensuring the stability of the current international system depend on our ability to deter key actors from aggressive and detrimental actions. We must interrupt enemy decision cycles and present enemies with multiple dilemmas that create uncertainty and paralyze their efforts. If aggression leads to conflict, however, we must be prepared to defeat our enemies unambiguously.

由於這些正反交織的戰略趨勢，美國和夥伴國部隊必須維持既有軍事優勢並重新奪回所失的優勢。降低衝突風險並確保既有國際體系的穩定，取決於我方有無能力嚇阻關鍵行為者採取侵略與破壞之行為。我方必須打亂敵人的決策流程並讓敵人同時遭遇多重難局，創造不確定性並癱瘓其作為。然而，當侵略行為引爆衝突時，我方也必須做好徹底擊敗敵人的準備。

This approach is the driving force behind the multi-domain battle concept, which is designed to overcome denial technologies and jointly affect all domains to create localized areas of overmatch.[9] These effects will then re-enable maneuver for the entire joint force operating in any region, thereby placing an enemy in a position of disadvantage so U.S. forces can gain the initiative.

此種作法便是驅使多領域作戰概念發展的原因，其係用於克服拒止科技並同時聯合所有領域之效應，以創造局部地區之絕對優勢。[9]這些效果接續便能讓特定區域內作戰的所有聯戰部隊重新採取用兵作為，藉此讓敵人陷於不利態勢，使美軍得以掌握主動。

Elements of the Multi-Domain Battle Concept

The multi-domain battle concept may at first sound like nothing more than traditional joint operations. There is some truth to this. What we are trying to achieve-cross-domain effects-is not entirely new. For example, at Thermopylae and Salamis, the ancient Greeks employed both land and naval forces to defeat the invading Persians.[10] Much closer to our own time, the United States of America owe their independence to the effective employment of American and French ground and naval forces against Lord Cornwallis's army at Yorktown.

多領域作戰概念的要件

多領域作戰概念表面上看來，彷彿不過只是傳統聯合作戰型態的一種。這點確有部分屬實。美軍今日試圖獲致者－跨領域效應－並非全新的概念。例如，古希臘人曾在溫泉關戰役和薩拉米斯戰役中，運用地面和海上武力擊敗來犯的波斯軍隊。[10]更接近當代

9 班森(Kevin Benson)著，「擴大第二波反制戰略與多領域作戰」，「戰略橋樑」，http://thestrategybridge.org/the-bridge/2016/11/29/extending-the-second-offset-and-multi-domain-battle，2016年11月29日，另見克拉克(J. P. Clark)著「為聯合作戰偉大理念辯護」，「棋盤之戰」，https://warontherocks.com/2016/12/in-defense-of-a-big-idea-for-joint-warfighting/2016年12月22日.

10 史特勞斯(Barry Strauss)著，「薩拉米斯會戰：挽救希臘與西方文明之海上交鋒」，(New York: Simon and Schuster, 2005), 15.

的例證是，美國獨立成功也必須歸功於有效運用美國和法國地面與海上兵力在約克鎮擊敗康瓦利斯候爵的大軍。

Another historical example is the Vicksburg Campaign during the American Civil War. With its ability to control navigation on the Mississippi River, Confederate Vicksburg's artillery, infantry, and cavalry forces constituted a formidable anti-access and area denial challenge to Union forces. Union Gen. Ulysses S. Grant overcame that challenge only by combining the capabilities and effects of his own artillery, cavalry, and infantry forces with the naval ships led by acting Rear Adm. David Dixon Porter.[11]

另一個史證是美國南北戰爭期間的維克斯堡戰役。藉由其掌握密西西比河航運的能力，南軍維克斯堡的砲兵、步兵和騎兵部隊對北軍構成一道強大的反介入與區域拒止防線。北軍的葛蘭特將軍最後是同步運用其所屬砲兵、騎兵和步兵，配合海軍波特代將指揮的軍艦所發揮之戰力與效果，才能克服此一障礙。[11]

The introduction of the airplane, the submarine, and the aircraft carrier in World War I, and the incorporation of mobile radio communications and radar systems in World War II, vastly increased a strategic commander's ability to operate across several domains simultaneously. More recently, the development of AirLand Battle in the 1980s and then Air-Sea Battle in 2013 show military thinking evolving along the same general line-how to win decisively, even if outnumbered or technologically overmatched, by integrating operations in multiple domains to present enemies with multiple dilemmas. Different services have regularly supported each other in all domains. Therefore, when Harris says he wants the Army to provide effects outside the land domain, he is not asking it to do something without precedent. From 1794 to 1950, the Army was responsible for coastal and harbor defense, and later for the air defense of the homeland. The Army's Warrant Officer Corps originated from the need in World War I for technical specialists to staff the Army's undersea Mine Planter Service. The idea of or desire for cross-domain effects is not new.[12]

第一次世界大戰期間飛機、潛艇和航空母艦的問世，加上二次世界大戰期間新增的機動無線通信和雷達系統，大幅增加戰略指揮官在多個領域同步遂行作戰的能力。距今更近的時間點，1980年代推出的「空地整體作戰」和2013年提出的「空海一體戰」概念

11 溫斯卻(Terrence J. Winschel)著，「勝與敗：維克斯堡戰役，(Mason City, IA: Savas Publishing, 1999), 85-6.

12 美國陸軍戰史中心探討其在這些面向的資料汗牛充棟，詳見http://www.history.army.mil.

，顯示出軍事思維一直在相同的廣泛路線上演進－亦即如何在即便數量或科技處於劣勢條件下，仍能藉整合多重領域作戰行動，讓敵人面對多重難局，而獲致決定性勝利。因此，當哈里斯上將表示其希望陸軍能發揮陸上領域以外的效應時，其所要求者並非無前例可循。美國陸軍從1794～1950年，一直都負責執行海岸及港口防禦任務，後來還負責美國本土的防空任務。其技術官(或稱准尉)團隊，就是來自第一次世界大戰期間陸軍水下佈雷單位對於某些技術專業人才的需求。因此追求跨領域效應的想法或期望並非今日才有。[12]

While all the services are being asked to perform their missions in a manner not terribly different from the past, there will be differences. We in the Army can no longer simply focus on the land, leaving the air and sea to other services. Nor can the Marine Corps, Navy, Air Force, or Coast Guard simply focus on "their" domains. We must all better integrate our planning, operations, command and control, and effects across all the domains.

雖然各軍種都奉命去執行那些與過去相去並非懸殊的任務，但終究還是有所不同。我們美國陸軍已經不能再單純專注於地面，而將空中和海上交給其他軍種。海軍陸戰隊、海軍、空軍或海岸防衛隊也不能只顧「自己」的領域。所有軍種都必須更有效整合在各領域的計畫作為、軍事行動、指揮管制和作戰效應。

To achieve integration requires a new approach, a new mind-set. All U.S. forces must change their distinct service cultures to a culture of inclusion and openness, focusing on a "purple (or joint) first" mentality. The Army must further integrate a mission command mind-set, where every person is empowered to gain the initiative based on his or her role and function. And it must focus on developing leaders who thrive in ambiguity and chaos.

達成此種整合需要新的作法和新的心態。所有美軍部隊必須改變其獨特的軍種文化，成為一種兼容且開放的文化，置重點於「紫色(或聯戰)優先」的心理狀態。美國陸軍必須更進一步整合任務式指揮心態，讓每一個人都有權力依據自身角色和職掌爭取主動。而且，必須置重點於培養從模糊與混亂狀況中成長的幹部。

Joint integration. The multi-domain battle concept is expected to integrate three key areas: organizations and processes, technology, and people. Changes in organizations and processes will be designed to provide different and better-focused Army tools to joint forces to overcome the United States' loss of superiority or parity in certain domains, particularly in the air, at sea,

and within cyberspace. The Army can no longer focus exclusively on the land domain; as part of a joint force, Army forces must provide other services effects in their domains to overcome their operational challenges, and vice versa. This means change must focus on greater ability to have cross-domain effects and more seamless and effective integration across joint forces.

聯戰整合：多領域作戰概念預期可整合三大關鍵領域：包含組織與流程、科技和人員。組織與流程的改變將用於提供聯戰部隊截然不同且更有重點的陸軍工具，以解決美國在某些領域全面或局部優勢喪失的問題，尤其是在空中、海上和網路等方面。美國陸軍不能再將重點完全只置於地面領域；身為聯戰部隊的一員，陸軍必須提供其他軍種在其領域內的效應，以克服友軍在作戰方面的挑戰，反之亦然。這意味著改變必須置重點於更有能力發揮跨領域效應，以及聯戰部隊之間更無懈可擊且有效的整合。

In United States Army Pacific (USARPAC), we are attempting this through three areas. The first is to design and experiment with flexible command and control designs, tailorable and scalable units, and flexible policies in key areas. Second, most of this experimentation will occur as a part of a redesigned exercise program designed to make all events joint and multinational, with the aim point being the Navy's Rim of the Pacific exercise in 2018. Finally, we are supporting increased innovation across the services in cross-component and combatant-command processes.

以美國太平洋陸軍部隊而言，目前已在三大領域進行嘗試。首先是設計與實驗彈性指揮管制設計、可量身打造與調整規模的單位以及某些關鍵領域的彈性政策。第二，此一實驗作為多數都將納入讓所有工作聯戰化與多國化的預先安排演習規劃中，目的是能在2018年美國海軍環太平洋演習時實施。最後，太平洋陸軍已開始支持所有軍種在跨軍種部隊和聯合作戰司令部流程方面的擴大創新作為。

Technology. Another key area is technological change. We must overcome and leverage the velocity of technological change, rather than losing our overmatch capabilities through slow acquisitions programs. The Department of Defense and the Army have already created the foundation for rapid material solutions with the Strategic Capabilities Office at the Office of the Secretary of Defense and the Rapid Capabilities Office at Headquarters, Department of the Army. These offices are doing an admirable job of repurposing current technology to innovate in application, a key component of recapturing our tactical edge. USARPAC is tied tightly into these efforts. It is including every piece of equipment in exercises and experimentation. As has been the case in this theater for years, USARPAC takes advantage of the great "battle

lab" culture this command has developed over the past decade or more. Technology offers key tools to support decision making, lethality, and protection. We must leverage this technology to empower our men and women and increase their lethality and effectiveness.

科技：另一個關鍵領域是科技變革。美軍必須克服並利用科技變化的速度，而非死守遲緩的武獲建案而喪失我方的優勢性戰力。美國國防部與陸軍已經由國防部長辦公室戰略能力室及陸軍部本部快速戰力室共同合作，奠定發展快速軍品解決方案的基礎。這兩個辦公室在重新調整現有科技發展目的，以促進應用創新方面，成效卓著，而這正是重新取回美軍戰術優勢的關鍵環節。太平洋陸軍與這些作為緊密結合。包含了演習與驗證的每一項裝備。如同太平洋戰區多年以來的例證，太平洋陸軍利用本部在過去十餘年來所建立的強大的「戰鬥實驗室」文化。科技提供諸多關鍵工具，輔助決策下達、殺傷力和防護力。我們必須利用此種科技讓所屬官兵擁有能力並加強其殺傷力與效能。

People. The final area the multi-domain battle concept addresses is people. The U.S. Armed Forces must use its people to overcome the challenges of being outnumbered, outdistanced, and "outlearned" by adversaries and enemies. People are America's greatest strategic advantage. To leverage this advantage, the Armed Forces must develop agile and adaptive leaders through education and training. Rigorous iterations of decision making, including "impossible" scenarios or "black swans" that soldiers would not expect, can help develop critical thinking skills.[13] Failure must be an option, under the principle that learning exercises develop leaders who will respond better in actual conflicts. Leaders must also receive some measure of cultural education and training that would allow them to experience different ways of thinking. In USARPAC, we are addressing both critical thinking and cultural understanding through a regional leader development program run by and for personnel at the Army service component command level. As the Army's advise-and-assist brigades come online, we will also include unit personnel headed to the Pacific in this education and training pipeline to prepare them for operations in this region.

人員：多領域作戰概念欲解決的最後一個領域是人員的問題。美國三軍必須運用所屬人員克服遭遇對手與敵人擁有兵力、距離和「學習」優勢的不利狀況。人是美國最大的戰略優勢。為運用此種優勢，三軍必須藉由教育訓練培養具敏捷與適應能力之幹部。

13 塔勒伯(Nassim Nicholas Taleb)著，《黑天鵝：極不可能事件的影響》(New York: Random House, 2010).「黑天鵝」係指某個鮮見、極具影響力且事後(而非事前)才能預知的狀況。

嚴格反覆磨練決心下達，包含官兵始料未及的「不可能」想定狀況或「黑天鵝」，有助培養批判性思維技巧。[13]依據學習型演習可以培養能更有效因應實際衝突狀況的幹部之原則，失敗必須成為一種選項。幹部還必須接受某種程度的文化教育與訓練，俾使其能體驗不同的思考方式。太平洋陸軍司令部目前已開始透過戰區陸軍軍種指揮部層級針對所屬人員執行之區域幹部培養計畫，解決批判性思維與文化瞭解等方面問題。配合美國陸軍顧問與援助團隊上線開始執行任務後，本部也將把派至太平洋戰區的單位人員納入此一教育訓練管道，以培養其做好在本地區執行軍事行動的準備。

Multi-Domain Battle in Practice

The following fictional vignette illustrates the multi-domain battle concept applied at the tactical level. This example is based on a hypothetical location in the Indo-Asia Pacific region.

多領域作戰具體作法

以下的虛擬範例將用於說明多領域作戰概念在戰術層級的運用方式。此一範例係依據印太地區某個假設地點所撰擬。

Let us say there was an island chain or a coastal land mass whose location would make it decisive terrain, influencing aerial or maritime navigation or access to a strategic port. Possession of this feature by a certain hostile power would constitute a serious threat to the international order and the stability and security of the Indo-Asia Pacific region.

假設說某個島鏈或濱海陸地的位置使其成為決勝地形，對於空中或海上航行或某個戰略港口的進出造成影響。某個敵對強國在掌握此一地域後，將對國際秩序或印太地區穩定及安全構成嚴重威脅。

The hostile power then seized control of the feature and announced it would restrict commercial air and sea traffic, denying access to any nation aligned with the United States. Treaty obligations would require the United States to intervene militarily, though the enemy's arsenal of weaponry and electronics was formidable.

該敵對強國後來奪取了這個地域，同時宣布將限制商業空中與海上交通、不讓任何與美國持相同立場的國家進出。美國依據條約義務必須採取軍事干預手段，但所面對的敵人卻擁有強大的各類武器和電子裝備。

A military option that applied the multi-domain battle concept might include using cyber

and space capabilities to temporarily blind and disrupt enemy command and control systems so special operations forces could move in and gain a foothold in the island chain. They then would facilitate Marine amphibious forces to secure the beachhead, an airfield, and other major structures required to create a secure beachhead. Immediately behind them would be Army watercraft loaded with heavy engineering equipment to repair the airstrip, if necessary, and construct hardened defensive positions. Simultaneously, Air Force C-17s and C-130s would bring in an Army Stryker battalion task force with a High-Mobility Artillery Rocket System battery, specially equipped with anti-ship cruise missile pods and a battery of the Indirect Fire Protection Capability weapon system for short-range air defense. In addition, a battery of 155 mm howitzers with hypervelocity rounds would be offloaded as the marines retrograded in the newly empty aircraft to reconstitute for subsequent forced-entry operations, if needed.

運用多領域作戰概念的軍事選項可能包含使用網路和太空戰力暫時切斷或擾亂敵人的指揮管制系統，使特戰部隊得以投入並在該島鏈建立據點。特戰部隊接著協助海軍陸戰隊兩棲部隊奪取灘頭堡、機場及其他建立鞏固灘頭陣地所需之重要建築。緊跟在後投入的是美國陸軍搭載修復機場跑道所需重型工程裝備的運輸艇(若有必要時)，同時修建堅固防禦陣地。同一時間，美國空軍C-17和C-130運輸機運送一支有納編一個高機動性砲兵火箭系統連的史崔克營特遣隊投入，該連特別配備反艦巡弋飛彈彈箱，而另一個間接火力防護戰力武器系統連則負責提供短程防空掩護。此外，一個配備高速砲彈的155榴砲連完成下卸，陸戰隊員則從剛騰空的飛機撤離，準備重新整頓進行另一波強制楔入之作戰(若有必要時)。

Within ninety-six hours, the Stryker battalion task force would be dug in and ready. With Air Force manned and unmanned systems, Navy ships and underwater drones, a suite of Army radar systems (such as AN/TPQ-36, AN/TPQ-37, or Sentinel) and the aerial threat detection Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System to see over the horizon, there would be an overlapping multi-domain network of sensors that could operate indefinitely to identify, target, and employ lethal and electronic fires in all the domains-land, sea, air, cyber, and space-simultaneously.

在96個小時內，該史崔克營特遣隊已完成部署及作戰準備。配合空軍有人與無人系統、海軍軍艦和水下無人載具、一套陸軍雷達系統(諸如AN/TPQ-36，AN/TPQ-37和尖兵雷達)及空中威脅偵測用「聯合攻陸巡弋飛彈防禦舉升型網連感測系統」提供超地平線偵測能力，將可構成重疊配置之多領域感測器網絡，可無限期運作，對所有領域－包含

陸、海、空、網路和太空－同步進行確認、標定和使用殺傷與電子火力攻擊目標。

The task force might be cut off from resupply or communication for indefinite periods. That is why this task force of about one thousand personnel would be able to support itself for up to thirty days-ten times the current doctrinal requirement of seventy-two hours for a unit of this size. But with advancements in mobile water purification, solar panels, batteries, wind turbines, and wave and tidal energy, as well as additive manufacturing printers to make repair parts, such a unit could be self-sufficient far longer than even much larger ones were in the previous century. They would still need fuel for their vehicles, but with drones and other autonomous platforms enhancing force protection, they could limit the need for fossil fuel-powered vehicles and supplement organic support assets with Air Force's Joint Precision Airdrop System.

該特遣隊可能被無限期切斷補給或對外通信。這正是為何這支約有1,000人的特遣隊必須能獨立作戰達30天以內，等於是現行要求此種規模之部隊須能獨立作戰72小時的10倍時間。但由於機動淨水、太陽能板、電池、風力發電機和波浪與潮汐能源，以及可製造保修零件的積層製造列表機等方面的進步，此一單位將可比前一百年兵力遠比其為大的單位獨立作戰更長的時間。部隊雖然需要車輛使用之油料，但也有無人機及其他自主性載臺強化其戰力防護，其將可降低石化燃料車輛的需求，並以空軍的聯合精準空投系統補強建制支援資產。

To reiterate, these units might have to operate in extremely austere conditions with limited resources and without a constant ground, sea, or aerial line of communication linking them to other friendly forces. However, these men and women would be ready, with exceptional leaders exercising mission command.

須在此重申的是，這些部隊必須在極端嚴苛的條件下，以有限資源遂行任務，且沒有連絡其他友軍部隊的固定地面、海上或空中交通線。然而，這些官兵在卓越幹部運用任務式指揮領導下，必定能勝任此類任務。

Again, this is just a thought exercise based on how Army forces in the Pacific are thinking about and experimenting with multi-domain battle. Application of the concept may look different in other parts of the world, or even in different areas of the Indo-Asia Pacific. However, it is clear that no matter the geography or the adversary, Army units must be well led,

well trained, and well equipped to operate in and across multiple domains in support of a joint force.

然而，這只是依據太平洋地區陸軍部隊思考與驗證多領域作戰的方式，所進行之思維推演。世界其他地方，甚或印太地區不同區域，對於此一概念的運用可能有所不同。然而，顯然不論面對任何地理環境或對手，美國陸軍部隊一定會有優質的領導、訓練和裝備，可以在各種不同領域內及跨領域間遂行任務，支援聯合作戰部隊。

One way to ensure this is the case is through holistic operational testing, with Army service component command and subordinate units working hand in hand with the concepts and doctrine developers at United States Army Training and Doctrine Command. Today in the Pacific, this is occurring. We are applying the joint integration, technology, and people aspects of the multi-domain battle concept through rigorous inclusion of concepts and capabilities in all our exercises, which will culminate in a major test at the Navy's Rim of the Pacific exercise in 2018. Moreover, we are considering how to integrate a multi-domain approach with our planning, equipping, and leader-development efforts.

確保此項目標達成的方式之一，就是進行全面性作戰測試，由戰區陸軍指揮部及其所屬單位與美國陸軍訓練暨準則司令部的概念與準則研發人員保持密切合作。在今日的太平洋戰區，此項作為正在進行。本部正藉由在所有演習中嚴謹融入各項概念和各種戰力，應用多領域作戰概念的聯戰整合、科技與人員面向，而其高潮將是在2018年海軍環太平洋演習中進行大規模驗證。此外，太平洋陸軍也正在思考如何將多領域作法與現有計畫、裝備和幹部養成作為結合。

The Army should not hesitate to resource and test this effort. Many of the concepts and capabilities found in the multi-domain battle concept will be needed not just for future conflict but also for near-term conflicts that might require us to be ready to "fight tonight." Make no mistake: testing and implementing a multi-domain approach will increase our readiness today, as well as prepare our men and women to win wars if the Nation requires it.

美國陸軍應該毫不遲疑地對此一作為提供資源並進行驗證。多領域作戰概念所提出的許多概念和戰力，不僅是因應未來衝突所必須，同時也是美軍可能必須做好「今晚開戰」準備之近期衝突所必須。千萬別懷疑：驗證與落實多領域作法將可增加今日美軍的戰備水準，同時讓官兵們做好在國家要求時打贏戰爭的準備。