



「森蚺作戰」五年後之挑戰與機遇 Five Years after Operation Anaconda : Challenges and Opportunities

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事隔五年，阿富汗夏希考特（Shahikot）山谷之「森蚺作戰」（Operation Anaconda，譯註：2003年3月2日至18日）仍然在美國地空戰鬥人員之間餘波盪漾，激辯未已（譯註：美軍中央司令部與特戰司令部，均禁止所屬官兵對外談論此次作戰）。然而，重新討論此事，有助於我們鑑往知來，以增進地空間之整合。本文將從「持久自由作戰」（Operation Enduring Freedom）探討起，並提供進一步改進之建議。文中之觀點係基於個人於2005～2006年在阿富汗整合地空作戰之經驗而成。

Five years later, the battle of Shahi-Kot Valley in Afghanistan, known as Operation Anaconda, still evokes heated emotions among U.S. air and ground warfighters. Nevertheless, reopening this discussion can help us examine the progress made and opportunities ahead to improve air and ground integration. This article reviews advances from Operation Enduring Freedom and offers suggestions for further improvements. The view presented is based on personal experience integrating air operations with ground maneuver in Afghanistan during 2005 - 2006.

缺失（Shortfalls）

「森蚺作戰」為「持久自由作戰」期間包括特種作戰及多國部隊參與之第一次大型的陸軍戰鬥。其中，揭露出許多聯合計畫作為與執行方面之問題。在戰區或作戰階層，浮現檯面的問題有三：組織、計畫與執行。

Operation Anaconda, the first largescale Army combat operation in Operation Enduring Freedom that included Special Operations and multinational partners, revealed a number of joint planning and execution issues. At the theater or operational level, problems surfaced in three key areas: organization, planning, and execution.

在組織之層面，山地聯合特遣部隊（Combined Joint Task Force, CJTF）（譯註：第10山地師師部）於不到「森蚺作戰」D日兩周之前，負起了指揮之責。該特遣隊並沒有負責空中部



隊之空中對地面戰鬥部隊支援之「計畫、協調、管制與執行」事宜之「空中支援作戰中心」（Air Support Operation Center, ASOC）。一個三人小組在作戰命令頒布當天抵達，但是為時太晚，已無法為作戰計畫提供空中部隊之專業。因此，就組織而言，聯合部隊缺乏一個重要的整合地空作戰指揮與管制的中心環節。

At the organizational level, Combined Joint Task Force (CJTF) Mountain assumed the lead for Anaconda less than 2 weeks before the scheduled D-Day. The CJTF did not have an Air Support Operations Center (ASOC), which serves as the air component's lead for "planning, coordinating, controlling, and executing" air operations to support ground combat forces. A three person ASOC cell arrived the day the operational order was published, but it was too late to offer the air component's expertise to the plan. Thus, organizationally, the joint team lacked a critical command and control node that should have integrated air with ground maneuver.

在執行上，當定翼機臨空時，卻無法與地面部隊充分結合。飛行員經常不知地面部隊之位置、應使用之武器以及其應執行之任務，或其他在空機之能力為何。由於部署於地面之「空中支援作戰中心」小組沒有通信裝備，缺乏律定優先、協同火力與將空中作戰整合至地面作戰，與達成目標之指揮與管制之工具。空中及地面的戰術層級是以其領導統御及主動積極，充分利用飛行員之能力以支援地面之戰鬥。美國的戰鬥人員都知道聯合作戰團隊（joint team）是有極大之精益求精空間與潛能的。

During execution, fixed-wing aircraft arrived overhead but could not integrate fully with ground forces. Aviators often did not know the position, ordnance, tasking, or capabilities of other on-scene flights. Since the ASOC cell deployed without its communications equipment, it lacked the command and control tools to prioritize, synchronize, and integrate the air operations with ground maneuver and objectives. Tactical leadership and initiative in the air and on the ground exploited as best they could the capabilities of the aviators supporting engaged ground forces. American warfighters knew the joint team has greater promise and potential.

目前之地空整合（Air and Ground Integration Today）

近期的「持久自由作戰」，顯示出更佳的地空整合是可行的。同時，有些領域還能更上一層樓。雖然不再有2005與2006年「森蚺作戰」那樣的規模，類似的營級作戰卻從較佳的各種提議中，獲益良多。

Recent operations in Enduring Freedom demonstrate that expectations for better air and ground integration are realistic. At the same time, they indicate areas for further progress. While there was not an operation of Anaconda's scope during 2005 and 2006, similar battalion-sized operations benefited from better initiatives.

組織——有一組配賦有強固長程通信裝備的「空中支援作戰中心」之參與，是極有其正面作用的。在「聯合空中部隊指揮官」（Combined Force Air Component Commander, CFACC）之作戰管制下，該中心納編為聯合特遣部隊之參謀，在作戰計畫作為中，提供重要之空中作戰



專業。他也指導分派至旅級之空中連絡官以及營級之「聯合終端空中管制官」（Joint Terminal Air Controller, JTAC）執行作業（如表一）。

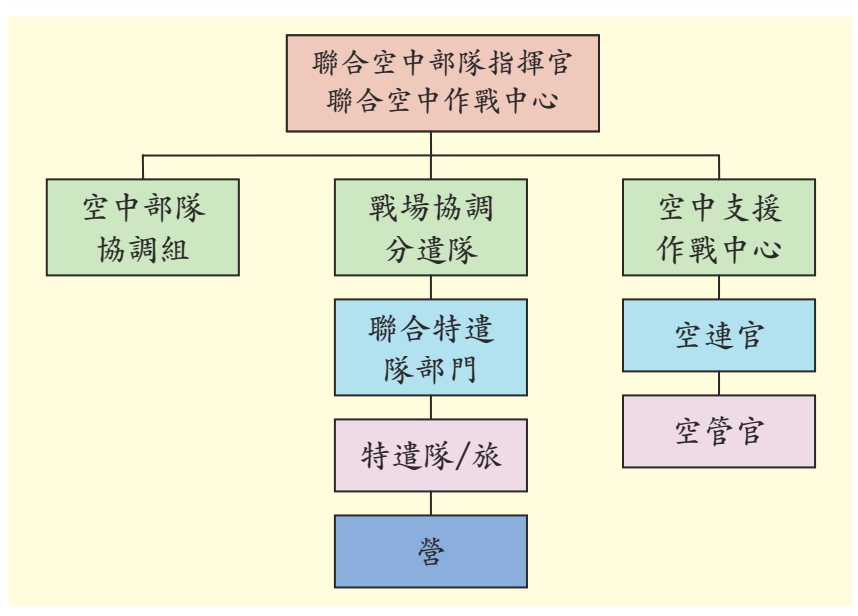
Organization. The presence of a robust ASOC with long-range communications equipment has had a positive impact. While under the operational control of the Combined Forces Air Component Commander (CFACC), the ASOC was embedded on the CJTF staff and provided vital air expertise to influence operations planning. It also guided the air liaison officers assigned to the brigades and enlisted joint terminal air controllers (JTACs) deployed with the battalions.

除了「空中支援作戰中心」之外，聯合特遣隊指揮部亦派駐有一組「空中部隊協調組」（Air Component Coordination Element, ACCE）。該組組長為「聯合空中部隊指揮官」派至聯合特遣部隊之代表。「空中部隊協調組」組長底下有一小型之空運、情報、計畫與密接支援之幕僚組。「空中支援作戰中心」與「空中部隊協調組」之幕僚共同協調地面部隊之需求，並提供建議。

In addition to the ASOC, an Air Component Coordination Element (ACCE) resided with the CJTF headquarters. The ACCE director represented the CFACC to the CJTF commander. The ACCE director had a small staff of airlift, intelligence, plans, and close air support officers. The ASOC and ACCE staff coordinated the ground component's requirements and offered recommendations. Figure 1 depicts the organizations available at different levels.

計畫：為協助地面部隊指揮官，「空中部隊協調組」之幕僚加強了「空中支援作戰中心」人員之大型作戰計畫作為之能力。自2005年秋至邁入2006年這段期間，「空中部隊協調組」之人員訪察戰地的旅級與特遣隊之參謀，實施了詳盡的計畫作為講習。此舉增加了空中部隊對地

表一 適用於各級之地空協調編組表





面部隊未來作戰之瞭解，使得有額外的空中專業人員可供運用。戰地共有三個旅與十餘個營，卻沒有足夠的飛行員以支援所有正在進行中的計畫作為。派在營級的聯合終端管制官，雖專精於空援申請與提供現地的空中管制，然而，他們缺乏如何充分善用所有空中與太空設施所需之知識。

Planning. To assist the ground commanders, the ACCE staff augmented the ASOC personnel for planning larger scale operations. In the fall of 2005 and into 2006, ACCE personnel visited brigade and task force staffs in the field to assist in detailed planning sessions. This increased the air component's awareness of ground units' future operations while making additional air expertise available. With three brigades and a dozen battalions in the field, however, there were insufficient Airmen to support all ongoing planning. The enlisted JTACs at battalion level were experts at requesting air assets and providing terminal control; however, they lacked the knowledge base to exploit all the air and space assets capabilities fully.

這些專業人員都編在聯合空中部隊指揮部，與其聯合空中作戰中心（Combined Air Operation Center, CAOC），後者的參謀區分四個部門：戰鬥策劃、作戰、情報與機動。地面部隊的戰場協調分遣隊也可充當提供情資的管道。

That expertise resided with the CFACC and his Combined Air Operations Center (CAOC). The CAOC staff had four divisions: combat plans, operations, intelligence, and mobility. The land forces component's battlefield coordination detachment also provided a conduit of information.

總括來說，他們負責計畫與執行空中與太空之作戰，以滿足美軍中央司令部責任地區內，各級聯合特遣部隊／各部隊指揮官所要達成之目標。

Collectively, they planned and executed air and space operations to meet the CJTF/component commander objectives for the entire U.S. Central Command area of responsibility.

在戰役的主要作戰階段（階段Ⅲ），聯合空中作戰中心策擬空中攻擊之主計畫與空中任務派遣命令，分配各架次之目標，以支援聯合特遣部隊/各部隊指揮官之目標。不過，在近期「持久自由」之緬靖作戰（counterinsurgency and stability operation）（階段Ⅳ）期間，該中心係專注於以密接支援，偶爾也有一些空運的任務，來滿足地面單位之空援申請需求。他們持續不斷的設定空援之優先順序，判斷情報、監視與偵察（ISR）蒐集來的戰略情報，以因應戰區與戰術層級之需求。整體而言，聯合空中作戰中心之計畫作為角色，反映出的是飛行員「集中計畫與分權實施」的方式。

During a campaign's major combat operations (Phase III), the CAOC developed a master air attack plan and air tasking order that assigned target sets to flights in order to support CJTF/component commander objectives. During recent Enduring Freedom counterinsurgency and stability operations (Phase IV), however, the CAOC concentrated on filling air requests from the ground units with close air support and occasional airlift missions. It continued to set priorities and assess the effectiveness of an intelligence, surveillance, and reconnaissance (ISR) collection strategy to meet theater and tactical requirements. Overall, the CAOC planning role reflected the Airmen's "centralized planning and



decentralized execution” approach.

相反的，地面部隊任務分析與行動方案之研擬，則是反映出「任務指示」（mission command）的路線，各下級領導人員則在指揮官意圖之範圍內，發揮積極主動之作為。戰場是動態不居，變化多端的，在研擬命令時需要有其彈性。結果，重大的作戰通常都是由連、營級階層發起的。一個連也許正在剿，另一個連則正在撫。茲舉一例說明：村中的長老們想要聯軍驅逐反阿富汗的好戰份子，但是他們意願與能力都不足（譯註：害怕報復）。因此，聯軍便會有一次大張旗鼓，以強力的兵力先剿，然後轉為協助重建之作戰。在綏靖作戰中，各連的連長是最瞭解其作戰地區特性，並據以擬定出最適切計畫的人。

In contrast, the land forces mission analysis and course of action development reflected a “mission command” approach, where subordinate leaders exercise disciplined initiative within the commander’s intent. The battlespace was dynamic and changing, which required a flexible approach as orders were developed. As a result, major efforts often started at the company or battalion level. One company may have faced a hostile operating area while another had a supportive local population. On at least one occasion, village leaders wanted coalition forces to remove belligerent anti-Afghan elements, but lacked the will or capability. Thus, an operation started with emphasis on lethal force, but transitioned to engagement and reconstruction tasks in its later phases as coalition forces sought to assist local populations. In counterinsurgency and stability operations, company commanders understood their unique battlespace and tailored plans accordingly.

就以上及其他的例子，連長將計畫逐級上呈至營、旅級。營、旅長則逐級加以審核以加強兵力、修改計畫或調整優先；然後再上呈至聯合特遣部隊指揮官。「空中部隊協調組」組長則與聯合特遣部隊指揮官同時審查該計畫。由於狀況多變，計畫經聯合特遣部隊指揮官批准後，通常便在12~48小時內付諸實施。

In the above example and others, the company commander forwarded the plan to battalion and then brigade level. At each level, the higher commander revised it—adding forces, maneuver, or priorities—and then forwarded it to the CJTF commander. The ACCE director saw the plan at the same time as the CJTF commander. Given the fluid situation, the plan was often executed within 12 to 48 hours after the CJTF/component commander approved it.

瞭解地空部隊計畫作為程序是非常重要的，理由有二：第一，它點出了這兩個部隊的計畫作為程序是完全相反的。簡言之，空中部隊的程序是由上而下，地面部隊則是由下而上。第二，儘管有這樣的差異，過去5年地空作戰的計畫作為都有極大的精進。所有計畫作為的準則規範中，飛行人員都保證支援陸軍官兵與海軍陸戰隊。

Understanding the air and land component planning process is important for two reasons. First, it highlights that the two components have opposite planning processes. In essence, the air component’s process is top down, while the land component’s is bottom up. Second, despite the differences, air and ground planning has improved over the past 5 years. The above description documents the Airman’s commitment to supporting the Soldier and Marine.



執行：計畫作為精進的結果，空中作戰也有所增進。空中部隊對重要作戰的質與量都有極大的貢獻。在一場多階段之戰鬥與人道救援作戰中，B-52轟炸機會在H時直前，對預先計畫好的各種目標（如山洞坑道）實施炸射，而A-10攻擊機則護航直升機機降的地面部隊進入。在執行前及執行中，情報、監視與偵察的資產如U-2龍夫人高空偵察機、RC-135鉚釘式聯合偵察機或掠奪者無人載具，也會在現地以建立指揮官的狀況覺知。如果有特戰部隊之參與，P-3獵戶星對地偵察機亦將抵達，加入情報、監視與偵察的行列與指揮管制之聯繫。電子戰攻擊機亦對地面指揮官之任務出力。在為期一週作戰的某一時間，會以一架C-130力士型運輸機空投補給品與人道救援的物資。各種空中資產會在不同的空層同時出現，但是大多只有在作戰之初，才會全部出動。

Execution. As a result of better planning, air operations improved. The air component contributed a significant quantity and quality of aircraft to major operations. For a multiphase combat and humanitarian operation, B-52s might strike preplanned targets (such as cave complexes) just prior to H-Hour while A-10s escort the heli-borne insertion of ground forces. ISR assets, such as U-2s, RC-135s, or Predators, would have been on scene to build commanders' situational awareness prior to and during the initial execution. If Special Operations Forces units participated, a P-3 might have been present, adding its ISR sensors and command and control links. Electronic attack aircraft provided their capabilities to the ground commander's mission. At some point during a week-long operation, a C-130 air-dropped additional supplies and humanitarian aid. The number of air assets simultaneously over the objective area varied; however, almost all were present at the start of the operation.

在阿富汗空降區，空軍C-130降落在陸軍AH-64直升機附近

此外，空中部隊會部署一個「管制報告中心」（Control and Reporting Center, CRC），提供共同空情圖，以及擔任「空中支援作戰中心」、「聯合空中作戰中心」與在空機之間的通信連絡之要職。各式飛機，如A-10攻擊機也裝備了改良型的長程無線電，能夠在飛行中重新賦予任務。空中部隊有了較佳的手段以執行地面部隊優先攻擊的目標。可以說從「森蚺作戰」5年以來，地空部隊之間都採取了許多正確的措施。

In addition, the air component deployed a Control and Reporting Center, which provided a common air picture and vital communications links among the ASOC, CAOC, and airborne aircraft. Aircraft, such as A-10s, were also equipped with improved long-range radios that enabled in-flight retasking. The air component had better means to execute the ground components' priorities. Thus, positive steps have been implemented between air and ground components in the 5 years since Operation Anaconda.

前瞻未來（Looking Forward）

步驟正確，效果更佳。聯合團隊為戰鬥帶來極大的潛能與技巧。欲在地空部隊之內以及他們之間有條不紊，行止有方，以下五大領域猶有待精進：



As positive as these steps are, more can be done. The joint team brings tremendous potential and skill to the fight. Harnessing that talent requires actions within the components and between them. Progress is possible in five key areas.

空中部隊之整合——在2005年夏季之前，當飛機即將抵達支援地面單位時，並不知道參戰的飛機還有哪些，這些飛機到達定位時，也不知他們作戰的高度或其他細節，使這些飛機無法發揮最大的戰力。將飛機表列於空中任務派遣命令是一個好的開端，但是這並不足以保證能夠合作無間。

Integrating the Air Component. As late as summer 2005, aircraft arriving to support ground units did not know who else was participating, when those aircraft were on station, what their operating altitude was, or other details that would allow the flight leads to optimize their contributions. Listing aircraft on the air tasking order is a good start, but it does not ensure a well-orchestrated effort.

增進空中部隊整合之關鍵，還是要求諸於各部隊與其參謀計畫作為。在其由上而下的計畫作為（集中計畫與分權實施）之下，聯合空中作戰中心具備能力整合空中與太空兵力的專業人員，比比皆是。他們用這些專家從事大型的，例如各種阻絕任務之空中作戰計畫作為。實施阻絕作戰時，聯合空中作戰中心會將「整批識別號碼」（package identification number）隨空中任務派遣命令頒布，如此一來，所有的參與者與飛行員，都能夠區分與識別誰在飛哪一架飛機。聯合空中作戰中心也會指定一位任務指揮官，由其負責協調其他單位做細部的計畫、整合與執行。

The key to improved air integration resides within the air component and its planning staff. In its top-down planning (centralized planning and decentralized execution), the CAOC has extensive expertise integrating air and space forces. The CAOC has used this planning expertise for large-scale air operations, such as interdiction package missions. In interdiction operations, the CAOC publishes the air tasking order with a “package identification number” so all participants and aircrew can sort and identify with whom they are flying. The CAOC also designates a mission commander, who coordinates with other units to develop the detailed planning, integration, and execution.

無可否認的，阻絕與密接支援/反暴亂任務是有所不同的。對阻絕而言，整批目標打擊的範圍甚廣，有時可達百餘哩。持續的時間也是有限的，從進入至脫離通常為60~90分鐘。相反的，反暴亂之空中支援作戰會持續幾天，地域也有嚴格的限制，通常直徑不超過10哩。雖然時間與空間都不同，但是都必須要有詳細的計畫作為。

Admittedly, there are differences between interdiction missions and close air support/counterinsurgency missions. For interdiction, the strike package ranges over a wide area—sometimes hundreds of miles. The duration of the package is finite, often 60 to 90 minutes from ingress through egress. In contrast, air support for counterinsurgency operations will last for days, and the area is sharply restricted, often to 10 miles in diameter. Differences in time and space, however, do not mitigate the necessity for detailed planning.

對其他的任務，聯合空中作戰中心應利用「任務指揮官」與「整批識別者」，以便空中單



位之細部計畫作為。以往的任務指揮官因為並不是一直停留在空中，因此需要有創新的方式來做計畫——但還是需要由一個人來負責。任務指揮官可由空中連絡官或在現地留空最久的飛機來擔任。這些細節應該依每一次任務作調整；一個清楚明確的總司其責的基本要求仍然是要維持的，以便有阻絕任務時，能立即迅速的實施。

As it does for other missions, the CAOC should use the “mission commander” and “package identifiers” to allow air units to do the detailed planning. It will require an innovative approach to traditional mission commanders as they will not be airborne continuously—but that does not remove the need for one person to be in charge. The mission commander could be the air liaison officer or the aircraft that is on station the most. While those details should be adjusted to each mission, the fundamental requirement for a clear authority will remain as urgent as it is for an interdiction mission.

計畫之修正——空中部隊的第二個缺失發生在執行任務之際，計畫卻改變了。「空中支援作戰中心」與像A-10雷霆機一樣配備改良型長程無線電的飛機，可以讓「聯合空中作戰中心」調整戰鬥機執行新的，例如因應聯軍遭受到伏擊之類的優先任務。當遭遇到簡易型爆裂物，或迫擊砲襲擊時，地面部隊向前運動以發現、拘束並與敵人接戰。有架次可用時，密接支援的飛機則在空中管制官的指示下協助戰鬥。然而在這種想定中，情監偵的飛機也可以擔負起決定性的角色。此外，電戰機也可為地面部隊提供電戰防護。重新賦予強大火力新的方向，只不過重新集中空中部隊之部分戰力就可以了。

Adjusting the Plan. A second shortfall within the air component occurred during mission execution when plans changed. The ASOC and improved long-distance radios on aircraft such as the A-10 allowed the CAOC to adjust fighters to a new priority, such as responding to an ambush on coalition forces. Once engaged by an improvised explosive device or mortar, ground forces moved to find, fix, and engage those hostile elements. When available, close air support aircraft did assist under JTAC guidance. In this scenario, however, ISR aircraft could play a decisive role. In addition, electronic attack aircraft could have provided a measure of protection for the ground force. Redirecting lethal firepower, however, is only refocusing a part of air component capability.

空中部隊已經證明出其有發現快速移動目標的能力。時機稍縱即逝的目標獲得——以發現、鎖定、標定、追蹤、接戰與評估之原則為準——現在已成為聯合空中作戰中心之作戰部門獵殺，諸如飛毛腿飛彈、戰甲車、防空雷達與砲兵等機動目標之要務。將這些工具用之於協助敵火下之地面部隊實為當務之急；然而，這必須將這些資產與其他的飛機、地面部隊之運動及火力即時整合在一起才行。修正支援反暴亂作戰之計畫作為程序，以充分發揮空中部隊之戰力是可行的。聯合空中作戰中心的挑戰之一，乃是如何在沒有通信保密的地區，建立一套精確自動轉發、具時效與高度機密的戰場情資手段。建立這樣的程序將可以藉由掌握重要情資，減低官兵傷亡，有助於地面部隊指揮官任務之達成。

The air component has demonstrated its competency at finding fleeting targets. Time sensitive targeting—based on find, fix, target, track, engage, and assess principles—has become a cornerstone of the CAOC's current operation division as it hunts mobile targets, such as Scuds, armor, air defense



radars, and artillery. Bringing these tools to assist ground forces under attack should be a priority; however, this requires integrating those assets in real time with other aircraft and with the ground unit's maneuver and firepower. Adjusting processes to support counterinsurgency operations will ensure that the full weight of the air component is brought to bear. One of the CAOC's challenges will be to develop a means to translate accurate, timely, and highly classified information on the battlespace where secure communications do not exist. Developing procedures will allow vital information to save lives and advance the ground commander's objectives.

共同計畫作為圖像（Common Planning Picture）——當空中部隊上下之間情資的流通改善時，有助於空中作戰，同時也能夠增進各部隊間之情資分享。綏靖作戰之戰場空域內各種聯合作戰的兵種都有。成功的作戰有賴於情資。例如攜帶目標獲得英艦的密接支援飛機，能夠追蹤掠奪者無人載具的雷射標定光束，以發現目標，但是卻必須要飛行員能夠彼此知道對方的位置，並協調雷射光的密碼方能達成。AC-130攻擊機的組員則需要知道他們要支援步兵連的位置與空投時間。但是如果要使AC-130攻擊機能夠轉發空投地區已經淨空的資訊給C-130運輸機，並提供雙方目視與火力支援的話，就必須要有同時傳輸情資的管道。一架RC-135鉚釘式聯合偵察機可以支援一個陸軍連級護送補給車隊的任務，但也要組員能夠知道其時間、地點與行軍方向才行。

Common Planning Picture. As improved information flow throughout the air component will aid air operations, the same will result from increased information sharing among the components. The counterinsurgency and stability operations battlespace has many joint players. Successful operations require information. For example, close air support aircraft with targeting pods can track the Predator's laser spot to find a target only if each pilot knows the other's location and coordinate laser codes. A C-130 aircrew needs the location and time for an airdrop from the company they are supporting. But if an AC-130 will relay drop clearance to a C-130 and provide visual and firepower mutual support, it should have access to the same information at the same time. An RC-135 can support an Army company moving in convoy only if the crew knows the time, location, and direction of travel.

這些作為都需要綿密的和地面部隊之火力與機動力整合在一起，如此空中的行動才能同步一體。這樣的敘述看起來似曾相識；其實它是取自聯戰刊物3-09.3「密支聯合戰術、技術與程序」之密接支援定義。不過，該定義的對象是對地面部隊之密接支援而言的。在反暴亂的作戰空域中，所有的定翼機都必須密切整合在一起，方能發揮其功效。

All these activities require detailed integration with the ground forces fire and maneuver, so the air action is synchronized. This description may sound familiar; it captures the essence of the definition of close air support in Joint Publication 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support. That definition, however, characterizes close air support for its support to ground forces. In the counterinsurgency battlespace, all fixed-wing effects must be carefully integrated.

要將致命與非致命的武器威力整合成同步一體，必須擴大計畫作為的程序，將陸海空與特戰部隊都包括在內。應建立一個網路為基礎的或類似性質的資訊技術的工具，以有



利於這些作為之遂行。一個共同計畫作為圖像或工具，將可使分布於各地的聯合部隊得以共享情資與整合其作戰行動。由於阿富汗境內的作戰環境千變萬化，各部隊間距離遙遠、時間緊迫，面對面計畫作為的方法是行不通的，需要有一個以科技為基礎，使下級單位（營、中隊與艦艇）能看到且能分享其未來作戰情資之方式。受支援之指揮官可以有自己的計畫作為程序，但應能使支援單位共同參與。較高的階層則檢視其情資以預判需求，但須等待下級上呈，經修訂、批准然後頒布計畫。在計畫作為的程序中，必須有一套嚴格的戰鬥作業紀律。其最終之目的，是建立一個適用於接合各部隊的共同計畫作為圖像。以共同計畫作為為工具，也可以成為在作戰執行中調整任務之基準。

Synchronizing lethal and nonlethal effects requires an expanded planning process to include land, maritime, air, and Special Operations components. A Web-based or similar information technology tool should be developed to facilitate these actions. A common planning picture or tool would allow the distributed joint forces to share information and integrate operations. Given the dynamic environment in Afghanistan and the distance between units, a time-intensive, face-to-face planning method is impractical. A technology-based approach would allow subordinate units (battalions, squadrons, and ships) to see and share information on a future operation. The supported commander would own the process but allow the supporting elements to contribute. Higher echelons could view the information to anticipate requirements but would wait for the lower echelons to revise, approve, and then forward the plan. A set battle rhythm would instill discipline in the planning process. The endstate is the development of tools and applications that permit a common planning picture across component seams. A common planning tool could also become the basis to adjust operations during execution.

表二顯示的是進一步地空整合有待解決之要項。雖然未盡周延，但卻點出了欲使空中資產與其他的聯合部隊更進一步整合所需之情資種類。

Figure 2 indicates a number of key issues that require resolution to better integrate air with ground force maneuver. While the list is not all-inclusive, it does highlight the types of information needed by other joint forces to integrate air assets better.

聯合計畫作為與執行——人們只要體認出各軍、兵種之間有擴大情資之需求時，就會瞭解到篩選過的情報交換，應該包括聯軍及地主國的軍隊。非軍事機構亦對聯合特遣部隊最終任務之達成有所助益。例如，阿富汗境內之各個省級重建小組（Provincial Reconstruction Teams），納編了美國跨部門的人員——美國國際發展署及農業部、商業部、司法部、國務院以及運輸部——還有阿富汗的中央政府。盟國與地主國多多少少也都有相同的組織。此外聯合團隊的戰鬥人員都會發現有聯合國、無國界醫師公會（Doctors Without Borders）與拯救兒童公會等，在他們的作戰地區之內實施作業。結果，聯戰部隊即便沒有為這些單位計畫與整合之能力，亦必須要能瞭解其活動之狀況。

Combined Planning and Execution. As one recognizes the need to expand information within the joint team, he realizes that select information exchange should include coalition partners and host



表二 聯合計畫作為與執行議題

情報、監視 與偵察支援	指揮官之情資需求要項為何？ 最適於蒐集其要項之資產為何？ 如使用U-2、JSTARS或P-3時，其抵達現地之時間與地點為何？ 如使用掠奪者時，其抵達現地之時間與地點為何？ 這些資產如何將即時情資傳送至在空機或地面單位？
特戰部 隊支援	P-3是否擔任指揮管制之角色？ P-3抵達現地之時間與地點為何？ P-3或AC-130如何自其他的在空機與地面部隊獲得情資？ AC-130活動範圍之時間與地點為何？
空運	如由C-130空中補給，其空投地區為何？ 其最終之軸線為何？ 由何人提供淨空？如由其他機種淨空，何人由那個頻道傳輸？
直升機支援	將於何時、何地實施直升機機降突擊？ 是否需要目視與火力支援？ 火力實施之最終決定權責誰屬？
電戰攻擊	有無電子戰攻擊機之需求？ 若然，其抵達現地之時間與地點為何？ 地面指揮官如何修正電戰攻擊計畫？
醫療後送	如需醫療後送，其地點為何？ 醫療後送是否需要護航？若然，其頻率為何？

nation forces. Nonmilitary agencies also contribute to the CJTF endstate. For example, Provincial Reconstruction Teams in Afghanistan included U.S. interagency personnel—the U.S. Agency for International Development and the Departments of Agriculture, Commerce, Justice, State, and Transportation—plus the Afghan central government. Allied and host nations will have equivalent organizations present to some degree. In addition, joint warfighters will find international agencies such as the United Nations, Doctors Without Borders, and Save the Children operating within their battlespace.⁶ As a result, the joint team should have awareness of their activities, if not an ability to plan and integrate with their efforts.

將非政府組織納進來之建議，當然會使人心生疑慮。提供分享情資之手段並非等於分享「所有的」情資。無論如何，非政府組織也是為同樣的最終目標共同奮鬥的，而且也已經在當地了。如果忽略了他們，將有任務失敗與誤傷非戰鬥人員之風險（譯註：此次作戰美軍多次發生誤擊友軍事件）。



The suggestion to include nongovernmental organizations may raise concerns.

Providing a means to share information is not the same as sharing all information. Nonetheless, the nongovernmental organizations are dedicated to the same endstate and are present. To ignore them risks both mission failure and fratricide with noncombatants.

演練最後，聯戰部隊必須演練這些協同計畫作為方式，以使所望之情資及其適用時機得以更加切合實用。演練也可以訓練幕僚與指揮官瞭解其他部隊之計畫作為程序與情資。在作戰準備時，各部隊不但有其獨特的計畫作為程序與技術，而且文化的差異也很大。類似「聯合遠征軍實驗」、「多國實驗」及「聯合紅旗」（Joint Red Flag）之演習，便提供了聯合作戰人員獲得經驗之機會。這些事項都能夠做為建立指揮與管制計畫作為工具所需之管道。

Practice. Finally, the joint force must practice these collaborative planning approaches in order to refine what information is needed and when. Practice will also train officers and commanders to understand the other components' planning processes and information. Components have not only unique planning techniques and procedures but also distinct cultures in operation development. Joint exercises such as Joint Expeditionary Force Experiment, Multinational Experiment, and Joint Red Flag provide the opportunities for joint warfighters to gain experience. These events can be the conduit to establish requirements for industry to develop command and control planning tools.

「森蚺作戰」及夏希考特山谷之戰鬥，為地空作戰投下了巨大的陰影。戰鬥過後5年，組織的改革使得地空部隊之計畫作為與執行都有所進步。「空中支援作戰中心」、「空中部隊協調組」與「管制報告中心」之部署，使得各級空中部隊之互動已有所改善，並對變動不居的狀況提供了一個調整的手段。當所有的部隊與其協力的部隊，都能夠完整建立並結合，而產生一個沒有漏洞的共同計畫作為圖像時，未來的前景將會更好。這些程序必須調和空中部隊由上而下，地面部隊由下而上的計畫作為的現實。各軍、兵種孤芳自賞是沒有用的（譯註：指的是特戰部隊）。相反的，聯合作戰人員必須尋求協調與整合才行。

Operation Anaconda and the battle of Shahi-Kot Valley continue to cast a shadow over air and land operations. Five years after the battle, however, organizational changes have allowed the air and land components to conduct better planning and execution. The deployed Air Support Operations Center, Air Component Coordination Element, and Control and Reporting Center allow the air component to interact better at all levels and provide means to adjust to changing situations. The future will be brighter when mechanisms are developed and incorporated that allow for a seamless common planning picture across all the components and their associated units. These processes must reconcile the realities that the air component planning is top-down while the land forces planning will be bottom-up. It is not useful to identify one as better. Instead, the joint warfighter must seek to exploit the attributes of both.

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