



空中與飛彈防禦的全球化

Air and Missile defense Goes Global

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2006年10月北韓測試核子裝置的舉動，將國家同時擁有核子彈頭與飛彈投射系統的夢境，向現實又推進了一步。這個地下核子試爆，立即成為各國國際媒體的頭條新聞，要求增加飛彈防禦計畫的經費。但是，這些頭條新聞文章中許多要求的事項，其實早已經在進行當中。

In October, North Korea tested a nuclear device that pushed the nightmare scenario of a rogue state armed with both nuclear warheads and missile delivery systems a step closer to reality. The underground detonation generated international headlines calling for increased spending on missile defense programs, but many of the initiatives called for in the articles that appeared below the headlines were already under way.

北韓核子試爆當天，第一批裝載的愛國者3型先進飛彈系統，剛運抵日本沖繩的Tengan碼頭，待命被運送到嘉手納美國空軍基地的防空砲兵第1營。愛國者防空飛彈營從美國本土德州的畢力斯堡，部署至日本的行動，已經成為媒體的頭條新聞。因為，此舉象徵美國已經在亞太地區建立戰區飛彈防禦的能力，同時也構成一個聯盟的防衛態勢。

In Okinawa on the day of the nuclear test, the first shipment of Patriot Advanced Capabilities-3 (PAC-3) missile equipment had just arrived at Tengan Pier and was awaiting delivery to the 1st Battalion, 1st Air Defense Artillery (ADA), Kadena Air Base, Japan. The Patriot battalion's deployment from Fort Bliss, Texas, to Japan had made its own headlines because it Symbolized both the buildup of U.S. theater missile defense capabilities in the Asia-Pacific region and a coalition approach to a more proactive defense posture.

當北韓展開核試行動時，南韓烏山空軍基地的美軍第35防空旅1營C連的士兵們，同時也進行一項戰備演練，以確保愛國者防空飛彈能隨時有效防禦，自北方而來的空中攻擊。而E連戰備值勤人員進行戰備演練時，並未特別關心北韓的核子能力或它所發展的長程飛彈，未來可能有能力擊中美國西岸。北韓知道快速發展的短程與中程戰區彈道飛彈，能夠攜帶傳統與化學彈頭，擊中朝鮮半島上的任何地點，並使敵手為此感到憂心不已。

As Pyongyang started its countdown, soldiers of Battery C, 1st Battalion, 43rd Air Defense Artillery, 35th ADA Brigade, Osan Air Base, South Korea, were, by coincidence, conducting an operational readiness



exercise to ensure that Patriot missile launchers oriented to defend against an air attack from the north were ready to launch at a moment's notice. AS Echo Battery's "hot" crews went about their battle drills, they were not particularly concerned about North Korea's nuclear capabilities or its development of a long-range missile that might someday be capable of reaching the U.S. West Coast. North Korea's burgeoning arsenal of short-and medium-range theater ballistic missiles, which they knew could strike any spot on the peninsula with conventional or chemical warheads, gave them enough to worry about.

愛國者防空飛彈系統在自由伊拉克作戰行動的星座系列防空任務操演中，以8對8的戰績成功攔截伊拉克飛彈時，確使愛國者營的士兵們士氣大振。然而，愛國者畢竟僅屬於美國多層戰區空中與飛彈防禦系統中較低層的系統，而預定部署在最上層的高層區域防禦系統，雖然目前尚未進行部署，惟據信近期即將有重大進展。

The stellar performance of U.S. Patriot systems during Operation Iraqi Freedom, when the system went eight for eight against Iraqi Freedom, when the system went eight for eight against Iraqi missiles, provided soldiers of the U.S. Patriot battalions cause for confidence. However, Patriot is only the lower tier of America's envisioned multilayered theater air and missile defense system. The terminal high-altitude area defense (THAAD) system, which will serve as the upper tier of theater missile defense, is yet to be fielded. The good news is that the missing piece is about to fall into place.

美國飛彈防禦局9月宣布，基於美軍與世界各盟國作戰指揮官的關注，將加速高層區域防禦系統的發展進程。而飛彈防禦局這個加速高層區域防禦系統部署的決策，主要係來自駐韓美軍指揮官貝爾將軍的極力關注。2006年3月9日貝爾將軍在出席國會軍備委員會之前，曾公開表示說：來自於北韓的威脅包括600枚以上的飛雲飛彈，以及大約200枚的中程彈道飛彈。面對這種區域性的飛彈威脅，需要一種機械化的戰區飛彈防禦系統，來防護重要的聯合部隊指揮部戰力與人員。貝爾將軍向軍備委員會作證說：愛國者3型飛彈系統的先進彈藥，明顯強化了我們的態勢，為了保護美軍部署在韓國的重要設施，我們必須以先進戰區飛彈防禦能力的標準，將其他所有的系統都進行升級。近期中持續生產的愛國者3型防空飛彈、繼續研發進程的高層空中防禦系統、空載雷射系統與神盾彈道飛彈防禦系統，將提供未來我們所需要的多層飛彈防禦能力。

In September, the Missile Defense Agency (MDA) announced its decision to accelerate the THAAD testing and fielding schedule, a decision that resulted from U.S. and allied combatant commanders' concerns around the world. The MDA based its decision to speed up THAAD fielding on concerns expressed by combatant commanders such as Gen. B.B. Bell, commander of U.S. Forces Korea. Gen. Bell had described the threat posed by the North Korean missile arsenal, which he said includes more than 600 Scud missiles and as many as 200 medium-range ballistic missiles, during his appearance before the House Armed Services Committee on March 9, 2006. "The regional missile threat requires a robust theater missile defense



system to protect critical Combined Forces Command capabilities and personnel. PAC-3 missile system upgrades and improved munitions have significantly enhanced our posture, “Gen. Bell told the committee. ‘To protect critical U.S. facilities in Korea, we must complete upgrading the remainder of our systems with advanced theater missile defense capabilities. Continued production of PAC-3 missiles in the near term, followed by continued development of the terminal high-altitude air defense, airborne laser and Aegis ballistic missile defense will provide the layered missile defense capability we require in the future.’”

北韓核試事件強化了貝爾將軍在出席軍備委員會之前，對於北韓飛彈威脅評估的說法。2006年7月4日北韓進行1枚長程飛彈與5枚短程彈道飛彈的試射，據部分專家指出，長射程的大浦洞2型飛彈，已具備攻擊美西地區的能力。雖然大浦洞2型飛彈在發射40秒後即墜地，但是，美國北方部署於科羅拉多州的第100飛彈防禦旅、部署於阿拉斯加州葛瑞利堡的第49飛彈防禦營，卻因此而進入高度戰備姿態，此舉顯示，北韓發射戰術彈道飛彈確實引起美軍作戰指揮官們的憂心。詹氏防衛週刊報導，這6枚飛雲級飛彈（可能包括勞動級飛彈）的成功試射，顯示北韓陸軍飛彈部隊，確實已經達到一定程度的戰備水準，而飛彈系統也已經發展成熟。貝爾將軍7月曾對亞洲週刊表示說，假如原先對於發展更先進飛彈防禦系統存在爭議的話，北韓接連展現的這一連串行動，已經有效替我們化解了這些爭議。直到朝鮮半島達成和平協議之前，我認為我們將能夠有效的防衛自己。

Events subsequent to Gen. Bell’s appearance before the committee reinforced his assessment of the theater ballistic missile threat. On July 4, 2006, North Korea conducted test launches of a long-range missile and five shorter-range ballistic missiles. The long-range Taepo Dong-2 missile, which some analysts believe is capable of hitting the western United States, failed after about 40 seconds, but it caused U.S. Army North to bring the 100th Missile Defense Brigade (Ground-Based Midcourse Defense) at Colorado Springs, Colo., and the 49th Missile Defense Battalion (Ground-Based Midcourse Defense) at Fort Greeley, Alaska, to operational status for the first time. However, it was North Korea’s tactical ballistic missile launches that most worried combatant commanders. Jane’s Defence Weekly reported that “the successful launching of six Scud-class missiles (possibly including one No Dong) demonstrates that the Korean People’s Army missile units have achieved a significant level of operational readiness and that the missile systems are developmentally mature.” Gen. Bell told the Asia Times in July, “If there was an argument for a more capable missile defense, they [North Korea] made it very effectively for us. Until there’s a peace treaty on this peninsula, I think we should be able to defend ourselves against them.”

第1防空砲兵的第1營自2006年8月起，開始從美國本土德州的畢力斯堡佈防至日本沖繩的嘉手納美國空軍基地，並接受駐防於夏威夷夏芙特堡的第94陸軍空中與飛彈防禦指揮部的指揮。將配備最新式的愛國者3型防空飛彈部署至嘉手納空軍基地，藉著在地區部署一種可靠的戰術彈道飛彈系統做為嚇阻，以強化日本與地區內美國空軍的安全。對於日本沖繩的兵力部署行動，僅是美國與



日本將採取相關行動的其中一步，以確定地區內有足夠數量的飛彈防禦系統。其他，還有部署於東京灣入口橫須賀基地的神盾級彈道飛彈巡防艦、防空指管能力的整合、東京郊區橫田空軍基地中聯盟作戰協調中心的成立，以及在日本北方部署X波段相位雷達，期能及早偵測與追蹤彈道飛彈的進襲。

The 1st Battalion, 1st Air Defense Artillery, began its deployment from Fort Bliss to Kadena Air Base in August 2006. The battalion falls under the command of the recently activated 94th Army Air and Missile Defense Command at Fort Shafter, Hawaii. Stationing the battalion, which is equipped with the latest PAC-3 missiles, at Kadena enhances the security of Japan and our Air Force assets there by providing a reliable tactical ballistic missile defense deterrent in the region. The Okinawa deployment is one of several steps the United States and Japan are taking to ensure adequate missile defenses are in place. Other examples include the deployment of an Aegis ballistic missile defense cruiser to Yokosuka (the entrance to Tokyo Bay), the collocation and integration of air defense command-and-control capabilities, the establishment of a bilateral joint operation coordination center at Yokota Air Base in the suburbs of Tokyo and the stationing of an X-Band radar in northern Japan to provide early detection and tracking of ballistic missile launches.

加速高層區域防禦系統測試與部署的期程 Accelerated THAAD Testing/Fielding Schedule

高層區域防禦系統的部署，可以在比愛國者系統更高的空層，對進襲的飛彈進行攔截，有效將戰區飛彈防禦能力提升至另一個更高的層次。這個加速進程的計畫，將原定於2012年以前完成部署的行動，提前於2009年會計年度年底，或2010年會計年度年初完成。做為美國彈道飛彈防禦系統一部分的高層區域防衛系統，將提供作戰指揮官們據以擊退威脅美軍與盟國部隊安全的敵軍短程、中程與中程彈道飛彈。高層區域防禦系統也可以與其他彈道飛彈防禦系統的成員，分享X波段相位雷達的目標情報。美軍飛彈防禦局將高層區域防禦系統，設計成能夠防禦大批量彈道飛彈的進襲，並保持高度彈性部署的選項。高層區域防禦系統並非設計來取代愛國者防空飛彈系統，而是與它一起防禦更廣闊的戰場。高層區域防禦系統也能夠與神盾級彈道飛彈防禦系統、陸基中途防禦系統，以及世界各地各種類型的感測系統合作，以提供針對彈道飛彈威脅的多層防禦。

The fielding of THAAD, which is capable of intercepting incoming ballistic missiles at much higher altitudes and ranges than Patriot, will take theater missiles defenses to the next level. The accelerated schedule will place THAAD in service by the end of fiscal year (FY) 2009 or early FY 2010, rather than in 2012 as originally planned. As part of America's ballistic missile defense system, THAAD will provide combatant commanders the ability to defeat short-, medium-and intermediate-range ballistic missiles that could threaten the United States, deployed U.S. forces, friends and allies. It will also share X-Band radar information with other members of the ballistic missile defense system. The MDA has designed THAAD to



defend against mass raids of ballistic missiles and to provide highly flexible employment options. THAAD does not replace Patriot, but works with it to defend a larger battle space. THAAD also works with the Aegis ballistic missile defense system, the ground-based midcourse defense system and various other sensors throughout the world to provide a layered defense against ballistic missile threats.

駐防在德州畢力斯堡第6防空旅的士兵們，最近在新墨西哥州白沙飛彈試射場，操作高層區域防禦系統的實彈射擊中，曾有1次成功攔截標靶的紀錄。該系統目前已被部署至位於夏威夷的飛彈測試場，以便進行更進一步的飛行測試。美國陸軍近期宣布，兩個配備高層區域防禦系統的連級部隊，將首度被派遣至駐防於畢力斯堡的第11防空砲兵旅與陸軍第32空中與飛彈防禦指揮部。被派遣至第11防空旅的士兵們，已經參與剛運達基地的高層區域防禦系統的研發與測試工作，新裝備的訓練工作也將自2008年起，依既定計畫如期展開。

Soldiers of the 6th Air Defense Artillery Brigade, Fort Bliss, operated the THAAD system during recent live-fire exercises at White Sands Missile Range, N.M., which included a successful intercept. The system has now been deployed to the Pacific Missile Test Facility in Hawaii for further flight tests. The U.S. Army recently announced that the first two THAAD batteries will be assigned to the 11th Air Defense Artillery Brigade, 32nd Army Air and Missile Defense Command, Fort Bliss. Soldiers assigned to the 11th Air Defense Artillery Brigade have been participating in THAAD development and testing in anticipation of the arrival of THAAD battery soldiers and equipment. New equipment training is scheduled to begin in 2008.

反制火箭、砲兵與迫砲攻擊的威脅 Countering the Rocket, Artillery and Mortar Threat

近期發生的若干事件，同時也促成另一種空中與飛彈防禦任務的需求，要求研發與部署有關系統，以反制火箭、砲兵與迫砲攻擊的威脅。在伊拉克與阿富汗，火箭與迫砲的攻擊事件，導致一筆為數可觀的軍民傷亡。2006年夏季真主黨民兵向以色列發動一波令人意外強力且複雜的火箭攻擊，以色列防衛部隊設計來攔截彈道飛彈的愛國者與箭式反飛彈系統，在火箭攻擊以色列城市的行動中，除了提供早期預警情資之外，卻對於整個攻擊行動束手無策。當火箭攻擊擊中海法與特拉維夫市時，新聞媒體不禁質疑，為何會沒有武器系統可以有效反制這些火箭的攻擊。

Recent events have also conspired to lend impetus to another air and missile defense mission-the quest to develop and field systems to counter the rocket, artillery and mortar threat. In Iraq and Afghanistan, rocket and mortar attacks account for a significant percentage of Coalition casualties. And this past summer, Hezbollah unleashed a surprisingly strong and sophisticated rocket barrage against Israel. The Israeli Defense Force's Patriot and Arrow anti-missile systems, designed to intercept tactical ballistic missiles, contributed to early warning, but stood silent as rockets-sometimes falling at the rate of one per minute-



slammed into Israeli cities. As rockets impacted in Haifa and Tel Aviv, the news media questioned why no weapon systems were available to counter them.

美國陸軍已經責令防空砲兵與野戰砲兵，加入反制火箭、砲兵與迫砲系統的研發與部署計畫。基於作戰安全理由的考量，我們在發展期程當中與未來，都將無法透露該系統更進一步的發展細節。但是，顯然反制火箭、砲兵與迫砲系統，將很快就能完成部署，以防護美軍與盟國部隊避免敵軍火箭、砲兵與迫砲的攻擊。

The Army has tasked Air Defense Artillery and Field Artillery to jointly develop and field counter-rocket, artillery and mortar (C-RAM) systems. For understandable operational security reasons, we cannot detail the tremendous progress already made in developing interim and future C-RAM systems, but it is apparent that C-RAM systems will soon be available to effectively defend deployed U.S. and Coalition forces (as well as host population centers) from rocket, artillery and mortar attacks.

有些人或許會辯說，真主黨民兵的火箭攻擊並不準確，即使真主黨民兵將火箭彈頭加以改裝，加入大量鐵珠成為人員殺傷系統後，仍只能造成少數人員的傷亡。有些人則辯說，這些傷亡評估其實並不值得投入數百萬美元的經費，來研發與採取相關的反制作為。但是無論如何，現今我們所面對的全球反恐戰爭，不再是以往傳統型態的戰爭。因此，也無法用以往傳統戰爭的傷亡標準，來衡量當前人員傷亡的情況。政治現實指出，美國與其盟友無法接受與承受，即使是人數相當低的軍民傷亡。我們的對手則視一名美軍士兵的死亡、美國兒童死於校園的遊玩，或平民死於慶祝活動市集的閒逛，為其戰略上的重大勝利。

Some might argue that the Hezbollah rockets were inaccurate, and that they inflicted relatively few casualties, even though Hezbollah fighters turned some rockets into nasty antipersonnel weapons by packing ball bearings into their warheads. However, the war in which we presently find ourselves-the global war on terrorism-is not a conventional war, and we cannot measure casualty rates by the yardsticks applied to previous wars. Political realities dictate that America and its allies cannot afford to accept relatively low military and civilian casualties in a protracted war of attrition in which our adversaries view the death of a single soldier as a strategic victory and the deaths of children at play in a schoolyard or shoppers browsing the stalls of a crowded bazaar as cause for celebration.

沙漠風暴作戰行動當中，當飛雲飛彈飛臨特拉維夫與達蘭市上空時，警報響起，美軍的回應是加強彈道飛彈防禦系統。現在，警報再度響起，這次昭示的將是不同型態的恐怖威脅已然來臨。美軍這次的回應應該是，堅定地繼續研發與部署機械化反制火箭、砲兵與迫砲部隊。

Sirens wailed as Scud missiles approached Tel Aviv or Dhahran during Operation Desert Storm, and our response was to strengthen our ballistic missile defenses. Now the sirens are wailing again, this time to announce the arrival of a different sort of terrorist threat. Our response this time should be a strong



commitment to the continued development and fielding of a robust C-RAM force.

全球反恐戰爭中的空中防禦系統 Air Defenders in the Global War on Terrorism

同時，防空砲兵的士兵們在全球反恐戰爭中，仍將持續扮演著重要的角色。現役陸軍與國民兵防空砲兵部隊，由於許多防空砲兵士兵們，被抽調參與自由伊拉克與持久自由等作戰行動的空中與飛彈防禦任務，而在阿富汗與伊拉克地區，擔負運輸護衛等非空中防禦本務的高風險任務。

Meanwhile, ADA soldiers continue to play important roles in the global war on terrorism. Both active and Army National Guard ADA units have taken on highly dangerous non-air defense missions (primarily convoy escort, transportation and transition team duties) in Iraq and Afghanistan while many ADA soldiers deployed for Operations Iraqi Freedom and Enduring Freedom are performing air and missile defense missions.

士兵們被指派到防空砲兵新編成的空中防禦空域管理組，並部署至前方地區空中防禦指揮、管制、通信與情報系統，與哨兵式地面雷達系統共同合作，以協助防空砲兵旅與史崔克戰鬥隊，降低於阿富汗與伊拉克戰場中過度擁擠的空域問題。

Soldiers assigned to ADA's newly created Air Defense Airspace Management (ADAM) cells are employing forward area air defense command, control, communications and intelligence systems and Sentinel radars to help brigade and Stryker combat teams deconflict crowded airspace in Afghanistan and Iraq.

防空砲兵士兵們已經部署許多快速輕型飛行器，至阿富汗與伊拉克戰場。2006年10月美國國防部簽署1,160萬美元合約，將運送更多的快速輕型飛行器、裝設於高塔、船桅與飛船上的威脅偵測系統。前述合約係一個部署輕型飛行器與鷹眼偵測系統，總額度超過2,310萬美元合約的一部分。其他還有一個總額13億美元的合約，提升聯合地面攻擊巡弋飛彈的感測系統，全案並預於2011年完成部署，以提供敵軍自視距外進襲巡弋飛彈的偵測與追蹤。該計畫將使先進的中程空對空飛彈系統，於2011年取代復仇者防空飛彈系統，做為暫時性作戰環境中相關威脅的反制手段。

ADA soldiers have deployed dozens of rapid aerostat initial deployment (RAID) systems in Afghanistan and Iraq. In October, DoD awarded an \$11.6 million contract for delivery of more RAID systems, a threat detection system deployed via towers, masts and airships. The award is part of a more than \$23.1 million contract for both the RAID and RAID Eagle Eye Sensor systems. Work also continues on the joint land-attack cruise missile elevated netted sensor (JLENS) under a separate \$1.3-billion contract. Scheduled for fielding in 2011, the JLENS will provide over-the-horizon detection and tracking of incoming cruise missiles. It will enable the surface-launched advanced medium-range air-to-air missile (SLAMRAAM)



system, expected to begin replacing Avenger in 2011, to counter one of the contemporary operational environment's most worrisome threats.

國土防空 Homeland Air Defense

當部分空中防禦系統參與伊拉克與阿富汗的作戰行動時，其他的空中防禦系統正於美國本土對抗恐怖分子的攻擊行動。陸軍國民兵防空砲兵營，配備復仇者防空飛彈、哨兵式地面雷達，以及地對空飛彈系統，輪流擔任美國首府地區的防空衛戍任務，以免再度遭受類似911式的空中恐怖攻擊。

While some air defenders are participating in combat operations in Iraq and Afghanistan, others are protecting the United States against terrorist attacks. On a rotational basis, ADA battalions from the Army National Guard are serving as America's "palace guard," employing Avengers, Sentinel radars and a surface-to-air missile system not included in the U.S. Army inventory-the Norwegian advanced surface-to-air missile system-to protect the National Capital Region against 9/11-type terrorist aerial attacks.

2006年7月，第44防空砲兵第1營復仇者防空部隊的70名士兵們，接受來自第43防空砲兵第3營、第7防空砲兵第1營的愛國者部隊士兵們的增援，並以一種混合編組連的型態，配備愛國者防空飛彈系統、復仇者防空飛彈系統，以及哨兵式地面雷達，從德州的畢力斯堡部署至加州的太平洋海岸。加入北美空中防禦指揮部對於美國本土地區，反巡弋飛彈防禦作戰概念的驗證，該連已經與空軍戰鬥機，以及海軍神盾艦成功的完成整合。

In July 70 Avenger soldiers from the 1st Battalion, 44th ADA, augmented by Patriot soldiers from the 3rd Battalion, 43rd ADA and 1st Battalion, 7th ADA, deployed a composite air and missile defense battery equipped with Patriot, Avenger and Sentinel radar systems from Fort Bliss to California's Pacific coast. Participating in the North American Air Defense Command's Deployable Homeland Anti-Cruise Missile Defense Proof of Concept Operation, the composite battery successfully integrated its air and missile defense systems with U.S. Air Force fighters and a U.S. Navy Aegis cruiser.

持續轉型的空中與飛彈防禦 Air and Missile Defense Transformation Continue

當加入全球反恐戰爭，面對世界各地區域性飛彈的威脅，和期待新武器系統的到達，空中防禦砲兵已經逐漸完成向空中與飛彈防禦部隊型態的結構轉型，以符合21世紀的作戰需求。向空中與飛彈防禦轉型的證明，即是師屬防空砲兵營的無法正常運作，該營幾乎係以愛國者與復仇者混合編組的型態，設置於師級以上的各級指揮部。依據近期規劃，2010年之前空中與飛彈防禦部隊，將由8個純愛國者營、5個空中與飛彈防禦混合營，以及1個先進中程空對空飛彈連編成。空中防禦空域管



理組將被設置於每個師級司令部、旅戰鬥隊、史崔克旅戰鬥隊，以及航空旅戰鬥隊，以重建以往師屬防空砲兵營失去的三度空間覺知與空域管理能力。

While engaged in the global war on terrorism, confronting regional missile threats around the world and anticipating the arrival of new weapon systems, Air Defense Artillery is completing its transformation to an air and missile defense force structure optimized for 21st-century operations. The hallmark of air and missile defense transformation is the inactivation of divisional ADA battalions, which is almost complete, and the creation of air and missile defense composite (Patriot/Avenger) battalions at echelons above division. As currently envisioned, by the end of this decade the air and missile defense force will consist of eight pure Patriot battalions, five air and missile defense composite battalions, and one pure SLAMRAAM battery. ADAM cells will be positioned in every division headquarters, brigade combat team. Stryker brigade combat team and aviation brigade combat team to restore third-dimension situational awareness and airspace management functional capabilities lost through the inactivation of divisional ADA battalions.

飛彈防禦全球化 Missile Defense Goes Global

近期部署的飛彈防禦系統，對於美軍預期在21世紀初期所面對的彈道飛彈威脅，提供了有效的防護措施。這一套系統將提供美軍近似滴水不漏的安全防護。美軍在反巡弋飛彈與無人飛行載具入侵威脅的先進中程空對空飛彈，與聯合地面攻擊巡弋飛彈等防護系統的發展上，將有快速的進步。類似北韓的飛彈發射與核子試爆事件，以及真主黨民兵於夏季中期以短程、中程與長程火箭轟擊以色列，均將加速防空與飛彈系統研發計畫，已經如火如荼進行的各項進程。

Our presently deployed missile defense systems give us a highly effective shield against the ballistic missile threats we expect to confront during the first part of the 21st century. Systems soon to be fielded will give us a leak-proof, or near leakproof, defense. And we are making rapid progress in developing systems, including SLAMRAAM and JLENS, to counter the emerging cruise missile and unmanned aerial vehicle threats. Events such as North Korea's missile launches and nuclear tests, not to mention Hezbollah's midsummer bombardment of Israel with short-, medium- and long-range rockets, serve only to add thrust to air and missile defense programs that were already in overdrive.

2010年之前，目前集結於畢力斯堡的空中防禦砲兵旅，將被分遣至全美各地的其他武力投射基地。空中防禦砲兵學校將從畢力斯堡遷移至奧克拉荷馬州的希爾堡，俾能提供更佳的戰訓發展相關資源。以往數十年來，美國愛國者防空飛彈營，總是單獨地站在戰區飛彈防禦防線的最前線，基地設置委員會的建議與修訂國家防禦策略等一連串積極作為，將成為有關空中與飛彈防禦文章的核心議題。今日的頭條新聞則是：防空砲兵無論如何，將不再是一個單獨運作的兵種。

Toward the end of the decade, ADA brigades currently clustered at Fort Bliss will begin dispersing to



other power projection platforms throughout the United States. The Air Defense Artillery School will move from Fort Bliss to Fort Sill, Okla., to stand up the Fires Center of Excellence, which offers both enhanced resources and opportunities to synergize training and combat development. In previous decades, when U.S. Patriot battalions stood virtually alone on the front lines of theater missile defense, these moves, which are mandated by Base Realignment and Closure Commission recommendations and revised national defense strategies, would have been the centerpiece of any article about air and missile defense. The big news today, however, is that air defense artillery is no longer a stand-alone branch.

德國、義大利與美國共同發展的中程增程空中防禦系統，最終希望能用以取代愛國者防空系統。陸軍將準備開始部署中程增程空中防禦系統，該系統目前正值設計與發展階段，未來的數年當中，將把中程增程空中防禦系統相關科技併入愛國者系統，愛國者系統事實上也將逐漸轉型成為中程增程空中防禦系統。中程增程空中防禦系統的發展目標，就是比現今的愛國者系統，具備更佳的部署與機動能力，未來更將具備360度的發射能力，並改善內部操作、狀況覺知、可靠性與毀滅性。

Germany, Italy and the United States are jointly developing the medium extended air defense system (MEADS), the eventual replacement for Patriot. The Army will start fielding MEADS, which is currently in the design and development phase, incrementally over the next several years by incorporating meads technologies into the Patriot system. Patriot, in effect, will morph into MEADS. The “objective” MEADS will be more deployable and more mobile than today’s Patriot. It will feature a 360-degree area of coverage and possess improved inter operability, situational awareness, reliability and lethality.

未來空中防禦砲兵的士兵們在面對空中與飛彈威脅時，將與世界各友盟國家團隊合作，以聯合戰區空中與飛彈防禦部隊，代表世界上科技最先進的國家。這種全球化趨勢將提供戰區空中與飛彈防禦部隊更全面的全球防禦能力，使美國與盟國部隊只要部署該類型部隊，便能獲得對於空中與飛彈攻擊的有效防護。

In the future, ADA soldiers will confront future air and missile threats as team players in a global alliance of joint and coalition theater air and missile defense forces representing the world’s most technologically advanced nations. This globalization will produce theater air and missile defense forces fully capable of globally protecting U.S. and allied forces from air and missile attack wherever they may be deployed.

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