防空與飛彈防禦全球化
Air and Missile Defense Goes Global

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2006年10月，北韓之核子試爆，促使流氓國家同時擁有核子彈頭及投射系統這種最壞的想定，更向實現邁進了一步。此次地下核爆使得要求增加飛彈防禦計畫經費的呼籲，成爲國際之頭條新聞，但是，由本文可知國際之間所望之各種行動方案，其實有許多業已積極展開矣！

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.

在琉球，核試當天，第一艘運載愛國者先進能力3型（Patriot Advanced Capabilities-3）（愛國者3型）飛彈裝備的艦艇，正抵達天眼（Tengan）碼頭，等待運至駐日本嘉手納（Kadena）空軍基地的防空第1旅第1營。該愛國者營係來自德克薩斯州布列斯堡（Fort Bliss），部署至日本，本身就成爲了頭條新聞，因爲此爲美國於亞太地區建立戰區飛彈防禦以及與盟國合作更加主動防禦之象徵。

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.

巧合的是，正當平壤之核試開始倒數計時之際，駐南韓烏山（Osan）空軍基地的防空第35旅、防空第43群之第1營第3連之官兵，正好在實施戰備演習，以確保愛國者之發射架能在無預警的狀況下，防範來自北方的空襲。當這些「戰志高昂」的弟兄戰鬥演練時，他們並不怎麼在意北韓的核武能力，以及其發展中有朝一日得以射達美國西岸的長程飛彈。北韓急速增長，配備傳統與化學彈

頭，能夠射抵朝鮮半島任何一處之短、中程戰區彈道飛彈，才是讓他們擔心的。

2006年夏天，防空第6旅之官兵於新墨西哥州之白沙飛彈射擊場，測試終端高高度區域防禦系統。

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.

美國的愛國者系統於伊拉克自由作戰（Operation Iraqi Freedom）中，8次對抗伊拉克飛彈，8次成功的優異表現，給予了愛國者營的官兵極大的信心。不過，愛國者只是美國想像的重層戰區防空與飛彈防禦體系之低層系統，充任戰區飛彈防禦高層之終端高高度區域防禦（Terminal High Altitude Area Defense, THAAD）系統，尚未部署。好消息是這消失的一塊，即將歸其定位了。

The stellar performance of U.S. Patriot systems during Operation 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 highaltitude 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.

9月時，飛彈防禦局（Missile Defense Agency, MDA）依據全球之美國與盟邦各級作戰指揮官之關切，宣布決定加速終端高高度區域防禦系統之測試及其部署時程。該局係基於如美韓聯軍司令貝爾（B. B. Bell）上將等作戰指揮官表達之關切而決定將該系統之部署期程提前。貝爾上將在2006年3月9日，出席眾議院武裝委員會時，敘述北韓現有飛彈所造成之威脅，其中包括有600餘枚之飛雲（Scud）飛彈，以及200枚左右之中程彈道飛彈。他說：「地區之飛彈威脅需要一個堅實的飛彈防禦體系，以保護重要之聯軍指揮能力與人員。愛國者3型彈藥之性能提升與改良，大幅強化了我們的態勢。」貝爾上將對委員會說：「爲保護美國於韓國之重要設施，我軍必須以先進之飛彈防禦能

力，完成其餘系統之性能提升。近期應該持續部署愛國者3型，繼而持續發展終端高高度區域防禦系統、空載雷射與神盾彈道飛彈防禦系統，以提供我軍未來所要之重層的飛彈防禦能力。」

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."

後續的事件，強化了貝爾上將於委員會之面前對戰區彈道飛彈威脅所做的評估。2006年7月4日，北韓實施了1枚長程與5枚短程彈道飛彈之試射。長程的大浦洞2型（Daepo Dong-2）飛彈，某些分析家認爲可以打到美國西部，其於發射後40秒失敗，但卻促使陸軍北方司令部（Army North）將飛彈防衛第100旅（陸基中途段防衛），部署至科羅拉多州的科羅拉多溫泉市；將飛彈防衛第49營（陸基中途段防衛）部署至阿拉斯加州的格瑞利堡（Fort Greeley），首度令其擔任戰備。不過，各級作戰指揮官最擔心的還是北韓的戰術性彈道飛彈。詹氏防衛週刊報導：「成功的試射6枚的飛雲飛彈（其中可能有1枚爲蘆洞飛彈），顯示北韓陸軍之飛彈部隊已到達極高的戰備水準，而且，其飛彈系統之發展已然成熟。」貝爾上將於7月對亞洲時報（Asia Times）說：「如果有更佳之飛彈防禦能力需求的話，北韓之作爲對我們影響甚大。除非這個半島有了和平條約，個人認爲我軍應該具有防衛自己，對抗他們攻擊之能力。」

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."

防空第1旅第1營，於2006年8月，自布列斯堡移防至嘉手納空軍基地。該營隸屬新於夏威夷薛福特（Shafter）堡成立之陸軍第49防空與飛彈防禦指揮部。該營裝備有最新型的愛國者3型飛彈，駐防至嘉手納，藉對地區提供一個可靠的戰術性彈道飛彈防禦之嚇阻，以強化日本與我空軍設施之安全。琉球之部署，係美國與日本爲確保有足夠之飛彈防禦所採取數個步驟之一。其餘還包括部署一艘神盾級彈道飛彈防禦巡洋艦至橫須賀（Yokosuka）（東京灣入口），於東京近郊之橫田（Yokota）空軍基地，建立一處有防空指管共同標定與整合能力之雙邊聯合作戰協調中心；並於日本北方派駐一部X頻段之雷達，以提供早期偵測與追蹤彈道飛彈之發射。

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 colocation 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

終端高高度區域防禦系統抵達夏威夷，於太平洋飛彈測試場做進一步之測試。

X-Band radar in northern Japan to provide early detection and tracking of ballistic missile launches.

加速終端高高度區域防禦系統之測試／部署期程
Accelerated THAAD Testing/Fielding Schedule

部署終端高高度區域防禦系統，攔截來襲彈道飛彈之能力，其高度與距離都遠較愛國者爲大，可將戰區飛彈防禦提高至上一個層次。加速的計畫是於2009年底或2010年初，便讓終端高高度區域防禦系統開始服役，而非原先規劃之2012年。做爲美國彈道飛彈防禦體系之一部，終端高高度區域防禦系統將可提供作戰指揮官具有擊滅得以威脅美國、駐外美軍、友邦與盟國之短、中以及中長程彈道飛彈之能力。該系統亦可與其他的飛彈防禦體系之成員，分享X頻段雷達之情報資料。飛彈防禦局對終端高高度區域防禦系統之設計是以防範大量的彈道飛彈之突擊，並提供高度的作戰部署之彈性。該系統並非是要將愛國者取而代之，而是與其協力以防衛較大之作戰空間。其亦可以與神盾系統、陸基中途段防衛系統，以及世界各地之各種感測器協力作業，以提供一個重層的防禦彈道飛彈威脅的體系。

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 battlespace. 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.

終端高高度區域防禦系統，最近於新墨西哥州的白沙飛彈射擊場一次成功攔截之實彈演習，係由駐布列斯堡的防空第6旅之官兵所操作的。該系統現在已部署至夏威夷之太平洋飛彈測試場，以備進一步之飛試。美國陸軍近日宣布第一批的兩個終端高高度區域防禦系統連，將納編至駐布列斯堡之陸軍第32防空與飛彈防禦指揮部所屬之防空第11旅。編配至第11旅之官兵業已參與第一個終端高高度區域防禦系統連之部署與測評事宜，以及預期到達的第二個連的官兵與裝備之作業。新裝備之訓練，預計於2008年展開。

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 deployedto 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.

反火箭、砲兵與迫砲威脅
Countering the Rocket, Artillery and Mortar Threat

最近之戰事亦賦予了防空與飛彈防禦另類的任務——尋求研發與部署反制火箭、砲兵與迫砲威脅之系統。於伊拉克及阿富汗，聯軍之傷亡有極大的百分比是由火箭與迫砲之攻擊所造成的。今年夏天，真主黨（Hezbollah）對以色列發射了大量威力與精密度超乎想像的火箭彈。以色列國防軍之愛國者與神箭（Arrow）反飛彈系統，設計上是用來攔截戰術性彈道飛彈的，雖然發出了早期預警，但是當火箭—有時以每分鐘一批之速率落下—猛烈攻擊以色列之城市時，卻束手無策。當火箭襲擊海法（Haifa）與特拉維夫（Tel Aviv）之後，新聞媒體則質疑何以沒有武器系統可用來加以反制。

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.

陸軍業已賦予防空砲兵與野戰砲兵，共同發展與部署反火箭、砲兵與迫砲（C-RAM）系統。其過渡與未來之系統，在研發上已有極大之進展，基於作戰保密之理由，我們不能揭露其詳情，但是顯然該系統在不久之後，即可有效的防衛已部署之美軍與聯軍部隊（以及地主國之人口中心），以免於火箭、砲兵與迫砲之攻擊。

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.

有人可能會認爲真主黨之火箭精度不佳，甚至於真主黨的好戰者，將球型軸承整包的裝入彈頭，把火箭改裝爲卑劣的人員殺傷武器，他們所造成的傷亡卻相當的少。也有人主張這樣的損害評

估，並不值得傾注數以百萬計的金錢以尋求反制的手段。不過，我們發現目前我們所處的戰爭—全球反恐戰爭—並非一場傳統的戰爭，我們不能用以往戰爭的評價標準來衡量傷亡的比例。在一場漫長的消耗戰中，當我們的敵人把一個弟兄的陣亡視爲一次戰略的勝利，以及將校園玩耍中的孩童或市集中熙來攘往的逛街群眾的死亡，用來大肆慶賀之際，政治的現實造成美國及其盟邦，都擔當不起極少數官兵與平民百姓的傷亡。

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. Some would argue that the damage assessment does not justify pouring millions of dollars into countermeasures. 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」（Operation Desert Strom）中，當飛雲飛彈進襲以色列的特拉維夫，或沙烏地阿拉伯的達黑蘭（Dhahran）時，在警報器呼嘯聲中，我們的反應是加強我們的彈道飛彈防禦。如今警報器再度淒厲的響徹雲霄，這次表明了來的是一種不同類型的恐怖主義的威脅。這次我們的反應必須以一個強烈的承諾，持續發展與部署一個堅實的反火箭、砲兵與迫砲部隊爲之因應。

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.

全球反恐戰爭中之防空部隊
Air Defenders in the Global War on Terrorism

其間，防空部隊官兵繼續在全球反恐戰爭中擔負重要的角色。無論是現役的與陸軍國民兵的防空部隊，在伊拉克與阿富汗，許多防空部隊於「伊拉克自由作戰」與「持久自由作戰」中執行防空與飛彈防禦任務之外，還擔當高度危險的非防空任務（主爲車隊之護送、運輸與任務交接小組護衛等事宜）。

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.

納編至防空部隊新成立之防空空域管理（Air Defense Airspace Management, ADAM）組之官兵，擔任前進地區之防空指管通情系統之運作，而哨兵（Sentinel）雷達則於阿富汗與伊拉克協助旅級與史崔克（Stryker）戰鬥隊，以消除其空域之擁擠。

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.

防空部隊於阿富汗與伊拉克，部署了10餘具快速浮升式主動部署（Rapid Aerostat Initial Deployment, RAID）系統。10月，國防部已獲得1,160萬美元之合約，以交付更多的快速浮升式主動部署系統，其爲一種藉由繫繩飛船上之塔臺與天線以偵測威脅之系統。此合約爲該系統與其鷹眼感測系統總價2,310餘萬美元合約之一部。聯合攻陸型巡弋飛彈舉升式網路感測器（JLENS）之研製工作，另以13億美元之合約，仍持續進行中。預計於2011年部署，該系統可對進襲之巡弋飛彈，提供超地平線之偵搜與追蹤。將可以使預定於2011年開始汰換復仇者（Avenger）之陸射先進中程空對空（SLAMRAAM）系統，得以反制當代作戰環境中最可怕的威脅。

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.

本土防空
Homeland Air Defense

除了參加伊拉克與阿富汗作戰之防空部隊外，其餘的則保護美國對付恐怖份子的攻擊。在輪調之基礎下，陸軍國民兵之防空營，以部署復仇者飛彈、哨兵雷達，以及一種不在美國陸軍軍械庫儲之內的地對空飛彈系統—挪威先進地對空飛彈系統—保衛國家首府地區，以防範911式恐怖份子的攻擊。

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.

在7月，70名來自防空第44旅第1營的復仇者官兵，加上來自防空第43旅第3營及防空第7旅第1營的愛國者官兵，以愛國者、復仇者飛彈與哨兵雷達，組成了一個混合防空與飛彈防禦連，自布列斯堡部署至加州的太平洋海岸。參加北美防空司令部之機動本土反巡弋飛彈防衛概念驗證作戰，該混合連成功的將其防空與飛彈防禦系統，和美國空軍的戰鬥機，以及一艘海軍的神盾級巡洋艦完成整合。

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.

持續防空與飛彈防禦之轉型
Air and Missile Defense Transformation Continue

在參與全球的反恐戰爭，面對世界各地區域性的飛彈威脅，以及預期還會有新的武器系統之出現，防空砲兵正在完成其轉型，成爲一支最佳化編組結構之防空與飛彈防禦部隊，以因應21世紀之作戰。防空與飛彈防禦轉型之特點是即將完成師級防空營之解編（inactivation），而在師級以上的階層建立一個防空與飛彈防禦混合（愛國者／復仇者）營。以目前之想像，至2010年，防空與飛彈防禦部隊將由8個純愛國者營，5個防空與飛彈防禦混合營以及1個純陸射先進中程空對空連組成。

在白沙經過一系列成功之測試後，終端高高度區域防禦系統裝備轉移至夏威夷之太平洋飛彈測試場。

每一個師部、旅戰鬥隊、史崔克旅戰鬥隊、航空旅戰鬥隊都將配置防空空域管理組，以恢復師級防空營解編之後，所失去的三度空間狀況覺知以及空域管理之職能。

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

我國目前所部署之飛彈防禦體系，讓我們能夠有一個高度有效的防禦之盾，得以對付21世紀初葉我們所預期的彈道飛彈威脅。即將部署之系統則將給予我們一個天衣無縫或幾近於滴水不漏的防禦體系。而且，我們正在研製中之系統亦有快速之進展，包括陸射先進中程空對空系統，以及舉升式網路感測器，以反制浮現中的巡弋飛彈與無人空中載具之威脅。類似北韓飛彈試射與核子試爆等事件，更不必說真主黨於2006年仲夏，以短、中、長程之火箭恣意對以色列之炸射，在在都大幅度的增加了我們業已全力推動的防空與飛彈防禦計畫之動力。

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 leakproof, 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.

至2010年，目前群集在布列斯堡的防空旅，將分散至全美各地其他的兵力投射平臺。防空砲兵學校將自布列斯堡移至奧克拉荷馬州之希爾堡（Fort Sill），使得在統合訓練與戰鬥發展方面，都能獲得大量的資源與機會，俾能得以維繫「優勢之火力中心」（Fire Center of Excellence）之名。在前面的10年，在戰區飛彈防禦之陣線上，等於只有靠美軍的愛國者營，如今已不再如此，在基地裁併與關閉委員會（Base Realignment and Closure Commission）之要求下，以及國防戰略之改變，防空與飛彈防禦已成爲其中心要旨。不過，當前之最大消息是防空砲兵已經不再是一支單一兵種了。

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 standalone branch.

德國、義大利與美國共同研發之中型增程防空系統（Medium Extended Air Defense System MEADS）最終將汰換愛國者。該系統刻正處於設計與發展階段，陸軍亦將開始著手其部署之事宜，並在未來數年內將中型增程防空系統之技術納入愛國者系統。愛國者，在功效方面，將成爲中型增程防空系統之型態。「目標部隊」之中型增程防空系統將較今日之愛國者更能部署與更加的機動。其特性將是一個可360度區域防護，並擁有更佳的共同作業、狀況覺知、可靠度與殺傷力之系統。

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 interoperability, situational awareness, reliability and lethality.

在未來，防空部隊官兵面對未來的空中與飛彈威脅時，將以小組成員之身分，在全球聯盟之聯合與聯盟之戰區防空與飛彈防禦部隊中，代表世界技術最先進之國家。這樣的全球化，將使得戰區防空與飛彈防禦部隊，無論部署於何處，都能夠有充分的能力以保護全球之美軍及其盟軍，免於空中與飛彈之攻擊。

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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