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STATEMENT FOR THE RECORD

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Good morning Chairman Weldon, Representative Abercrombie and Members of the Subcommittee. I appreciate the opportunity to speak to you today about the initiatives underway within the Department of Defense to ensure that the leadership of the Department, especially the warfighters, has access to timely and accurate intelligence as they go about their business on behalf of the American people. Traditionally this hearing is singularly focused on Unmanned Systems. This year I will begin by laying the context for our Intelligence, Surveillance, and Reconnaissance (ISR) investments.

DoD's intelligence effort and the Military Intelligence Program (MIP) serve two purposes. First, they assist the Secretary of Defense — and by extension his senior subordinates, military and civilian — in the discharge of his responsibility to anticipate and prepare for and, should dissuasion and deterrence by the U.S. Government fail, direct military operations, and, in the aftermath of those operations, provide requisite support to other elements of the U.S. Government to manage the effects of those military operations. Second, they provide the Director of National Intelligence (DNI) a highly responsive capability to assist him in discharging his responsibility for providing national intelligence to the President, the rest of the Executive Branch, and the Congress.

DoD's intelligence effort is focused on three types of activity:

- That which is uniquely associated with DoD's mission or is fundamental to it, e.g., tactical human intelligence teams, operational preparation of the battlespace, advance force operations, or counterintelligence activities by the Military Departments for force protection overseas;

- That which may support either the Secretary of Defense or the DNI as each executes his mission, e.g., U-2/Global Hawk systems, the activities of SOCOM's Special Mission Unit, or Imagery and Signals Intelligence (IMINT and SIGINT) operations in support of a Chemical-Biological-Radiological-Nuclear-Explosive (CBRNE) render safe mission;

- That which is uniquely associated with the DNI's mission or is fundamental to it and is executed by direction of the DNI through agencies or personnel within DoD, e.g., most obviously NSA, NGA, NRO and DIA for the collection or analysis of foreign intelligence, or the support to foreign instrumentation collection provided by Cobra Judy or Cobra Dane.

On balance, the DoD intelligence effort is weighted toward the first two types of activity. With respect to the third--the DNI's specific mission--the Secretary has responsibility under the Intelligence Reform and Terrorism Prevention Act of 2004, such as serving as a member of the Joint Intelligence Community Council, the exercise of joint milestone decision authority with the DNI, or providing to the DNI a statement of departmental needs and requirements for consideration in the National Intelligence Program (NIP). But these are responsibilities assigned to the Secretary in the context of support to national intelligence activities, which the DNI oversees, serving as the President's prime staff intelligence adviser and determining the NIP. The first two are rooted in the Secretary's responsibilities within the chain of command from the President to the Combatant Commanders (COCOMs).

DoD Intelligence Efforts

The COCOMs and their subordinate Joint Task Force (JTF) Commanders have led the demand to adapt the organization, process and products of DoD's intelligence efforts. They recognize that intelligence is now an operational function, and that "actionable" intelligence can be created by operators directed by analysts who in turn can help operators achieve the mission objective. Translating the Commanders' experiences, their "lessons learned," into useable and effective capability is one of the responsibilities of the Office of the Under Secretary of Defense for Intelligence (OUSDI). Toward that end, a number of initiatives are being pursued. I'd like to elaborate on four of them: Intelligence Campaign Plans, JIOCs, Persistent Surveillance, and the Military Intelligence Program.

Intelligence Campaign Plans

Intelligence Campaign Plans (ICPs) are under development as part of DoD's adaptive planning process. That process yields operations plans (OPLAN) for a variety of scenarios and contingencies. ICPs are the intelligence component of the operation plan. An ICP will identify what a COCOM might need to know to avoid surprise or extend warning time. It will identify resources — people, platforms, collection capabilities, and critical skill sets such as language and cultural expertise — the COCOM believes are needed to support the military operation. And, it will provide an estimate of support for the post-conflict period.

The ICP ought to identify activities or operations that might yield needed information, subtly affect the calculus of a potential opponent or disrupt his intended operations before they gather momentum. For these reasons, execution of operations in support of the ICP might occur well in advance of a crisis or conflict.

ICPs are also the vehicle by which a Commander will present his intelligence requirements, identify the extent to which assets organic to the Command or the Department can meet that need, and identify gaps in capability or knowledge, or both, which can be presented and justified to the DNI to be addressed by national systems. As a result, ICPs will offer--for the first time--a regularized process by which Commanders can present to DoD, and DoD can present to the DNI, their needs.

Joint Intelligence Operations Centers (JIOCs)

New times require new organizations to meet new demands. The JIOC concept has been developed in coordination with and with the assistance of the DNI's senior staff and the Agency directors. The SECDEF has recently approved the establishment of a JIOC in each Command and at DIA headquarters.

At the October 2005 Combatant Commanders conference, COCOMs all agreed that recent experiences have demonstrated the speed, power, and combat effectiveness that can be achieved by closely aligning intelligence with traditional operations and plans functions. JIOCs are designed to effect that alignment and transition of intelligence from a "staff" to an "operational" function. As such, it will incorporate appropriate elements of the Joint Intelligence Centers and Joint Analysis Center (JICs and JAC) currently within the Commands. The JIOCs will fully integrate all intelligence functions and disciplines and enable commanders to plan and execute more agile and responsive operations before, during and after a crisis or conflict.

The JIOCs will align -- under one chain of command -- collection, analysis, information management, and Intelligence, Surveillance, and Reconnaissance (ISR) operations with force operations. It will be the organization that develops the ICPs. JIOCs will be an interdependent, operational intelligence organization at the Defense, theater, COCOM and Joint Task Force (JTF) levels, integrated with national intelligence and capable of accessing all sources of intelligence impacting military operations, planning, and execution.

The Defense JIOC, led by Director, DIA, will be the lead DoD intelligence organization for coordinating intelligence support for the Combatant Commanders. It will oversee and manage the ICP process within DoD, adjudicate competing military intelligence demands and allocate resources among the Commands, to include, in conjunction with the DNI, the relative weight of effort among the combat support agencies, and the service intelligence centers operating in support of military missions. To enhance his role, the DIA Director has been assigned, in addition to his role as DoD Collection Manager for NIP purposes, the ISR Component Commander for USSTRATCOM. As such, he has the authority to direct DoD's organic air and naval collection areas. In addition, he has been given increased responsibility for human intelligence (HUMINT) within DoD. We believe this combination will permit the Defense JIOC to integrate, horizontally and vertically, DoD collection and analysis.

In addition, the DNI is planning to locate an element of his collection management team within the Defense JIOC. This will permit real-time deconfliction of COCOM requests for national intelligence support with those of other agencies and ensure that national collection tasking is appropriately distributed among DoD organic capabilities to meet the DNI's needs.

We believe these initiatives will ensure that DoD's leadership and its forces are effective in carrying out DoD's primary mission of anticipating, preparing for, and conducting military operations along the continuum of crisis and conflict, and supporting any post-operational activities in which they might be engaged. In particular, they support what Secretary Rumsfeld has described as the Find, Fix, and Finish mission.

Persistent Surveillance

The key to the "Find" and "Fix" efforts is persistent surveillance. Field commanders often refer to this as the "unblinking eye." Achieving persistence does not necessarily mean that a sensor, system of sensors, or human is "staring" incessantly at a target, never looking away. Instead, it means:

- Achieving access to a target of interest commensurate with the purpose of the surveillance. For example, if revisiting every 15 minutes satisfies the intelligence purpose of objective, and the target can be revisited every 15 minutes, persistence is achieved.
- Expanding ways to achieve persistence extend beyond technical means such as through improvements in "human" activities.
- Improving networks to fully realize persistence.

- Enhancing the capacity to process, analyze (as necessary), and provide access to collected information or the derived intelligence on a timescale that is meaningful to the end user.
- Developing historical context to better understand the target of our surveillance.

Achieving persistence for all-source intelligence will require balanced investment tradeoffs to obtain the right intelligence capabilities.

Emblematic of this capability is Predator, which as one of our most successful programs can, literally, stare without blinking at a target or activity for an extended period of time. However, the *ability* to perform this capability should not be confused with a *necessity* to perform it. Said a different way, just because we *can* stare at a target with Predator doesn't mean we *should* stare at every target with a Predator. A properly employed system of systems can best achieve the effects of persistent surveillance.

The DoD continues to pursue at the operational and strategic level of activity the analog to this tactical-level “unblinking eye” which provides a very narrow field of view--akin to looking through a soda straw. The laws of physics are such, however, that the wider the field of view for imagery one desires, the higher the platform needs to be or the heavier it needs to be — or both. This poses considerable technical challenges. To help meet those challenges, DoD has great interest in bringing the imagery capabilities of such systems as Global Hawk on line and moving forward on the Space Radar, in addition to programs like the Army's Warrior.

(U) The Military Intelligence Program

Previously, DoD's intelligence efforts were funded through the Joint Military Intelligence Program (JMIP) and Tactical Intelligence and Related Activities (TIARA). These resource structures were not the most effective construct for managing DoD intelligence capabilities and assets. With the active participation and support of the DNI, the Deputy Secretary of Defense established the Military Intelligence Program (MIP). The MIP has been built with transparency and order that ensures the Department, DNI and Congress can understand and assess — arguably for the first time — the allocation of resources to meet COCOM and leadership needs; identify what DoD provides to the DNI; and identify gaps to be filled first through the MIP or other DoD resources, and lastly through a request for support from the DNI.

The MIP assessments will be based in part on the outputs of the ICP process. ICPs will identify the COCOM's end-to-end intelligence needs. As such, those needs will form the point of departure for resourcing decisions in the MIP. However, other considerations, related to, among others, technology maturation, shifting defense priorities, adjustments in national strategy and guidance from the DNI will be weighed in resourcing decisions. Because MIP resources support DoD intelligence capabilities, it is essential that they not be diverted to pay for lower priority, non-intelligence DoD activities. Accordingly, the Deputy Secretary designated the Under Secretary of Defense for Intelligence (USD/I) as the MIP Program Executive. USD/I approval is required before funds can be diverted to other uses over the life of the program and in the year of execution.

Already we are seeing how the MIP can effectively shepherd ISR capabilities through the resource decision making process; the Quadrennial Defense Review (QDR) process resulted in a 7 percent increase to ISR in FY07 alone. A total of \$1.8B is being invested in DoD UAS in FY07, most of which focuses on the Department's intelligence efforts.

Progress Over the Last Five Years

Looking back five years, the QDR of 2001 emphasized persistence to find and strike the projected threats. We wanted survivability to ensure freedom of action in all mediums and collaborative capabilities to permit agile and adaptive operations. We've achieved some measure of persistence by adding numbers to our Unmanned Aircraft Systems (UAS) force structure and our operators are using them in ways unimagined in 2001, but our understanding, employment, and management structure must keep pace with our experience. To that end, we initiated a change to the Unified Command Plan in 2003 and gave U.S. Strategic Command (STRATCOM) responsibility for managing the Global ISR mission. As mentioned previously, STRATCOM established the Joint Force Component Command/ISR (JFCC/ISR) and designated the Director of the DIA as the Commander to execute this responsibility.

The 2004 Authorization language directed the stand-up of the ISR Integration Council and the writing of an ISR Roadmap. The Council has met over 25 times since then on topics such as budget issues, QDR impacts on intelligence, defense language issues, and the development of JIOCS and the MIP. This senior leader scrutiny ensures coherent policy and programs across the department. Through this forum for synchronizing efforts across DoD intelligence we delivered

the first ISR Roadmap in 2005. The Roadmap charts our investment strategy and looks across all the major programs and organizes their capabilities across the years of delivery. It is a major step in visualizing our investment information and recognizing where our strengths and weaknesses are. We continue to update the ISR Roadmap as new threats, opportunities and strategies emerge. Both the ISR Council and ISR Roadmap were good ideas from Congress. We embraced them and are making them work to ensure leaders of the different services and agencies are working toward common goals.

2006 QDR: Capability-Centric ISR

As the QDR notes, warfighters and decision makers alike depend on the full range of intelligence capabilities to satisfy their needs. For that reason, the DoD will seek suites of capabilities, focusing in the first instance on the kind of data being sought, rather than which platform or from which medium collection should occur. This places an emphasis on sensor types, where they might best be located and the analytic and command and control support they require to be effective. We believe this approach will result, over time, in a more seamless interaction among warfighters, planners and intelligence operators by employing an integrated approach to execute the mission rather than tasking a particular aircraft, ship, satellite, submarine or ground sensor. It can, over time, result in an analysis-collection-analysis cycle in which analysis drives collection and collectors have access to the full panoply of capabilities to meet demand.

Key QDR Studies

Through the QDR, we also laid the groundwork for additional discussions supporting the FY 2008 program build. We will be pursuing several studies focused on the assessment of ISR requirements, again supporting a capabilities-vice platform-centric approach:

- The Department's ISR strategy starts with a systems-of-systems approach so good systems won't be over-burdened with requirements as if they are expected to stand alone. OUSDI will be working with the Joint Staff, Services, AT&L, and PA&E, to develop a methodology to migrate to a capability-centric focus instead of a platform-centric focus for determining overall airborne ISR requirements, leading to a proper mix of capabilities.

- OUSDI will also be working with the Joint Staff and the UAS Center of Excellence to develop a methodology, more specific than above, for determining JTF and COCOM sensor capability requirements for UAS which will be more useful than the current approach of counting orbits — where the only metric is “more” being better than “fewer.”

- The Department has considered how many high altitude ISR platforms it can sustain for years. In the face of difficult budget decisions, the Air Force started the process that will retire the U-2 airframe by FY11. At the same time, we recognize this is a step that needs continued analysis. USSTRATCOM will work with the Air Force, Navy, and OSD elements to review U-2 retirement plans and Global Hawk acquisitions to determine how to assure that high-altitude, long-endurance, multi-intelligence surveillance and reconnaissance requirements will be

satisfied during the transition. The U.S. Air Force senior leadership has assured USDI, as the Program Executive for the MIP, that there will be no gap between the retirement of the U-2 and the Global Hawk acquisitions.

- Pursuant to the restructure of the Aerial Common Sensor (ACS) program, the Services, along with several OSD elements and the Joint Staff, will study their joint multi-intelligence airborne ISR needs, focusing specifically on the tradeoffs among manned and unmanned platforms, and how these tradeoffs translate into requirements for recapitalizing the current Guardrail, EP-3, Rivet Joint, and Airborne Reconnaissance-Low fleets.

- Communications are essential to UAS to get the data from aircraft payloads back to the ground, and to send command and control instructions within the system. OUSDI is leading an analysis of alternatives to evaluate cost-effective way for meeting ISR communication needs.

Together, these studies form the ISR Execution Roadmap, tasked by the QDR, and outputs of these studies will drive the update to the ISR Integration Roadmap and the FY08 budget build.

Turning Specifically to UAS:

As our maturity with unmanned systems grows, the words we use to describe them have also changed. In the past we had referred to UA systems as “unmanned aerial vehicles (UAVs).” The term “UAV” puts emphasis on the air platform, ignoring the other essential components of an effective system – like the ground control station, the sensors and payloads, the communication links, and the

data distribution infrastructure. We believe the term “unmanned aircraft systems” better captures the maturing nature of systems taken as a whole and have begun using this term, most notably in our update of the technology roadmap. This terminology encompasses the combination of components in the system, rather than focusing on a single element, and it resonates with our system-of-system vs. platform approach that we took in the QDR.

DoD Unmanned Aircraft (UA) Systems are playing a major combat support role in both Operation IRAQI FREEDOM and Operation ENDURING FREEDOM. During the past year, UA operations supporting the Global War On Terror expanded dramatically, with tactical and theater UA flying over 100,000 hours. The flying hours doubled from 2003 to 2004, and then doubled again from 2004 to 2005. Unmanned Aircraft Systems (UAS) are playing an ever increasing role in a wide range of DoD missions, including counter-insurgency operations, force and infrastructure protection, collection of vital intelligence, and strike of time-critical targets. UAS are also playing a vital role in homeland defense and domestic disaster relief operations, as well as supporting civilian agencies in other missions, including border security.

We currently group UA systems into 3 categories: small, tactical, and theater. The different classes of UA meet different Joint Capabilities Integration Development System (JCIDS) validated requirements.

Small UAS are operated by one or two soldiers, hand- or bungee-launched, and are used primarily for situational awareness, force protection, and limited intelligence collection. They remain in the “local area” of the controller out to a range of 5 - 6 nautical miles (nm), at altitudes up to 1000 feet, and for up to 1 hour.

The small UAS provides utility as a low-cost asset, one that the soldier has direct control over. They are usually battery operated, carry electro-optical or infra red cameras, and are similar in size and performance to remote-controlled (RC) model aircraft. The small UA can operate for well over 100 missions, but due to their relatively low cost can also be used as expendable aircraft when mission needs dictate. Over 80 percent of the small UAS inventory is the Army Raven and Marine Corps Dragon Eye models, which have 90 percent common components. While small UA make up 90 percent of the total UA inventory by aircraft quantity, only 1 percent of the President's 2007 UAS budget is attributed to small UAS. Each of the military departments and the Special Operations Command are planning to procure Raven "B", an improved Raven.

Tactical UA provide direct support to tactical forces for reconnaissance, surveillance and targeting, and have longer endurance and range, and carry more capable payloads than small UA. The Army Shadow program gives the Brigade commander a tool that he can count on for his own collection needs. Recent improvements will make the Shadow more robust in weather, and give the users increased image clarity. An example of a tactical UA used by the Marine Corps and the Navy is the Pioneer. Although flown off ships by the Navy in the first Gulf War, all the operational Pioneers have now transitioned to the Marine Corps. Both services are using their Pioneer experiences in the planning phases for their next generation of tactical UAS.

The theater-level UA, most of which are still in the development phase, provide the greatest ISR and weapons delivery capability and meet different requirements. For example, the Global Hawk's sole focus is on ISR, while Predator provides a hunter-killer capability. The Army uses the Hunter UAS now, but is moving to Warrior, which shares the same prime contractor as the Air Force Predator, and is another example of the evolution of capability taking place.

As directed by the Quadrennial Defense Review (QDR), the Air Force and Army are working together on their Predator A and ER/MP UA acquisition programs. By 2013, the Navy plans to introduce a Broad Area Maritime Surveillance (BAMS) system to cover maritime and littoral areas of interest. Theater-level UA account for 94 % of the President's 2007 UA budget. Today, the Military Departments have a force of over 2600 small UA, and over 300 tactical and theater-level UA supporting military operations worldwide. While we enjoy success, there are some issues you asked us to address.

Three years ago, we added money to the Air Force's Unmanned Combat Aircraft System (UCAS) program to get working air vehicles introduced in modest numbers in order to learn what an unmanned, low observable, network centric combat systems could offer. There was a difference of opinion on the way to get there: should the focus be on numbers of air vehicles or on the sophistication of the technology to be demonstrated.

In January 2003 OSD created a joint demonstration program lead by DARPA. Priorities for other areas of the budget along with Congressional concerns over the maturity of requirements led us to reducing funds available for J-UCAS, which led to new differences on whether to spend limited resources on the operating system or again on numbers of air vehicles. In 2005, program management was transferred back to the Air Force and the Navy. Subsequently as part of QDR, and therefore the FY07 President's Budget (PB), the Air Force will focus their efforts on the unmanned aspects of long-range strike, to include demonstrating unmanned aerial refueling technical readiness, while the Navy will focus on demonstrating carrier based unmanned technology readiness. The plan is to focus on maturing technologies and capabilities not yet demonstrated.

The Global Hawk acquisition program is going through a Nunn-McCurdy certification because it is more than 25 percent over its cost baseline. In 2002 the Global Hawk program took direction to grow from its 2000lb payload capacity to a 3000lb payload capacity, the design driver being the need to grow from a single intelligence collection capability (imagery) to a multi-intelligence collection capability (imagery and signals intelligence). It needed increases in size, payload capacity, and power to accommodate the extra collection capability. The complexity and design effort to go from the then-called "A model" to the larger "B model" was underestimated. Design estimates that predicted portions of the aircraft would remain the same had to be changed and new design work undertaken. Consequently, this led to an increase in estimated cost.

The design of the larger model is now finished and the first article is planned to fly by the end of this year. Additionally, the extra burden to execute the development program while supporting combat operations with the prototype aircraft led to additional cost increases.

The nature of the past problems must be understood in the full context and management practices put in place to assure success in the face of future challenges. The Nunn-McCurdy working groups are making progress in reorganizing the program and the Under Secretary of Defense for Acquisition, Technology, and Logistics, intends to complete the Nunn-McCurdy certification by June.

While we deal with these specific issues just outlined we have cross-cutting goals for all UA programs. Commonality and interoperability are primary goals for all UA programs. Larger UAS are implementing the use of common data link (CDL) in compliance with FY 2006 Congressional language and the Assistant Secretary of Defense for Networks and Information Integration (ASD(NII)) "DoD CDL Policy" memo dated December 30, 2005. The memo provides DoD

Components direction regarding data link framing and transport standards, so as to be compatible with the Global Information Grid. Additionally, UAS remote video terminals have historically been limited to receiving video from one UAS, but remote video terminals capable of receiving video from different UAS programs are now being fielded.

The need for spectrum regulatory compliance is essential to ensure successful deployment within the United States and its Possessions, and within foreign nations where the Department conducts operations. Recognizing the importance of regulatory compliance and its role in reducing radio frequency interference, the Office of the ASD(NII) and the Office of the Secretary of Defense UAS Planning Task Force initiated studies to provide a sound technical basis for recommending frequency band allocations for UAS data links. Policy guidance will be forthcoming based on the studies' results.

While the UA systems we already fielded are performing well, an overarching construct is essential to order our thinking, guide our engineering, and enable us to safely operate these systems in the future. We are striving for a systems architecture that allows data to be moved for a variety of uses, either a few miles or thousands of miles away. This architecture includes adequate spectrum and bandwidth for communication, airspace management and deconfliction, common data standards and formats to allow sharing and data fusion, deliberate contingency mission planning to deal with signal loss, common operating systems, and system interoperability. While most of these elements are not unique to unmanned systems, there are, in fact, distinct challenges in applying them to unmanned systems. Since cost is very important, all of these related elements, as

well as the hardware components of the systems must be balanced with an eye on controlling system life-cycle costs, while maintaining a safe and effective system.

Conclusion

During the past year, the Office of the Secretary of Defense (OSD) has been actively involved in molding the long-term Department vision for UAS with regular exchange of information with the Military Departments. We released a third edition in August 2005 of the Unmanned Aircraft Systems Roadmap, 2005 – 2030 which provides guidance to ensure that Service-developed systems and capabilities support the Department's goals of fielding transformational capabilities, establishing joint standards, and controlling cost. The technology in the UAS Roadmap will be taken to the next level when analyzed in the QDR studies and programmed into the Department's ISR strategy embodied by the ISR Roadmap. The final piece is a new management construct that is more appropriate for system-of-systems approach than managing one program at a time.

We are aligning authority and accountability through Joint Capability Portfolios. This effort is intended to move the Department's emphasis from single Service acquisition systems to a concept of joint portfolio management. It will continue the shift from stove-piped vertical management structures to more transparent and horizontally-integrated capability structures. There will be many systems within a portfolio. One of the first portfolios to be matched against this construct is battle space awareness which includes most of the MIP. The joint capability portfolio construct will encompass three levels: governance, management, and execution. Governance will ensure the framework, policy, and priorities are in order across the range of programs. The management level will do

the requirements balancing across various capabilities and ensure the proper resource ratios are in place. The execution level will remain focused on oversight of specific programs (e.g. Global Hawk). In the end, managing the ISR enterprise, a system-of-systems, through a Joint Capability Portfolio will ensure the cross-cutting oversight necessary for investments to pay out in capability.

Thank you for your support. I am happy to answer any questions you may have.