TESTIMONY OF

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AND INFORMATION TECHNOLOGY ACQUISITION

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SUBCOMMITTEE ON AIR AND LAND FORCES

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INTRODUCTION

Good morning Chairman Abercrombie, Mr. Saxton, and Members of the Subcommittee. I am the Deputy Assistant Secretary of Defense for Command, Control, Communications, Intelligence, Surveillance, Reconnaissance and Information Technology Acquisition (C3ISR & IT Acquisition) within the Office of the Assistant Secretary of Defense for Networks and Information Integration. I am here today representing Mr. Ken Krieg, the Undersecretary of Defense for Acquisition Technology and Logistics. I provide acquisition oversight for Mr. Krieg on major defense acquisition programs and major automated information systems programs. I also support the Undersecretary of Defense for Intelligence by reviewing the acquisition programs under development by the defense intelligence agencies.

DoD Intelligence, Surveillance, and Reconnaissance (ISR) systems are playing a major combat support role in both Operation IRAQI FREEDOM and Operation ENDURING FREEDOM. During the past year, unmanned aircraft system (UAS) operations supporting the Global War on Terror expanded dramatically, with tactical and theater unmanned aircraft flying well over 160,000 hours. This is an increase of some 60,000 flying hours over this time a year ago.

DoD UAS Flight Hours
(By Department, By Fiscal Year)
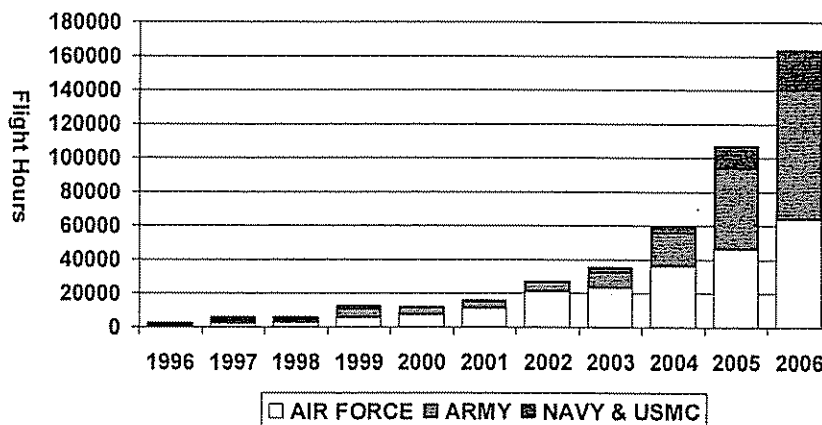
Does not include man-portable Small UAS
(e.g., Raven)

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 can also play a vital role in homeland defense and domestic disaster relief operations, as well as supporting civilian agencies in other missions, including border security, when given authorization to operate in the National Airspace System.

Your committee asked that this testimony focus on specific objectives. I addressed each objective below.

The qualitative and quantitative measures used to evaluate the Department's present ISR capabilities and what those measures indicate.

The Department utilizes various measures to evaluate present ISR capabilities. These measures include tracking trend data regarding the different types of ISR assets and capabilities requested, an assessment of assets that are provided to the different Combatant Commanders, and operational data regarding how effectively and efficiently ISR assets are being utilized. The measures indicate the demand for ISR capabilities of all types are increasing at a rapid rate and that the Department's initiatives for increasing persistent surveillance in both quality and quantity are needed to move us towards this goal.

The Department's planning and resource management methodology for determining ISR required capabilities and the process through which efficient development, procurement, and support is achieved.

Defense Intelligence continues to evolve in managing and strengthening the intelligence support to the warfighter. The Department established a "Capability Portfolio Management" (CPM) approach for managing like capabilities prior to development of the Fiscal Year (FY) 2008 budget. Among the Capability Portfolios established was the Joint Battlespace Awareness (BA) Portfolio, which addressed ISR planning and resource issues in support of the Department's FY08 Budget request. As part of the CPM process, defense intelligence capabilities were reviewed across the enterprise, and then prioritized based on the warfighter's needs. These efforts enabled key trade-off decisions by the Department's leadership to ensure the most effective use of intelligence resources and investments.

Shortfalls, as applicable, in Office of the Secretary of Defense (OSD) authorities to properly oversee the military services ISR programs.

In May 2006, the Deputy Under Secretary of Defense for the Military Intelligence Program (DUSD/MIP) was established to support the continued development and management of the MIP. DUSD/MIP is also the secretariat for the Department's ISR Integration Council which is responsible for ensuring the broadest range of views are highlighted before establishing the Department's overall direction for joint-ISR capabilities. The DUSD also serves as the BA Portfolio Manager. Through the creation of this position, the Department is better able to ensure clarity, transparency, and thorough analysis of all ISR capabilities and funding to support efficient and effective resource allocation across Defense Intelligence.
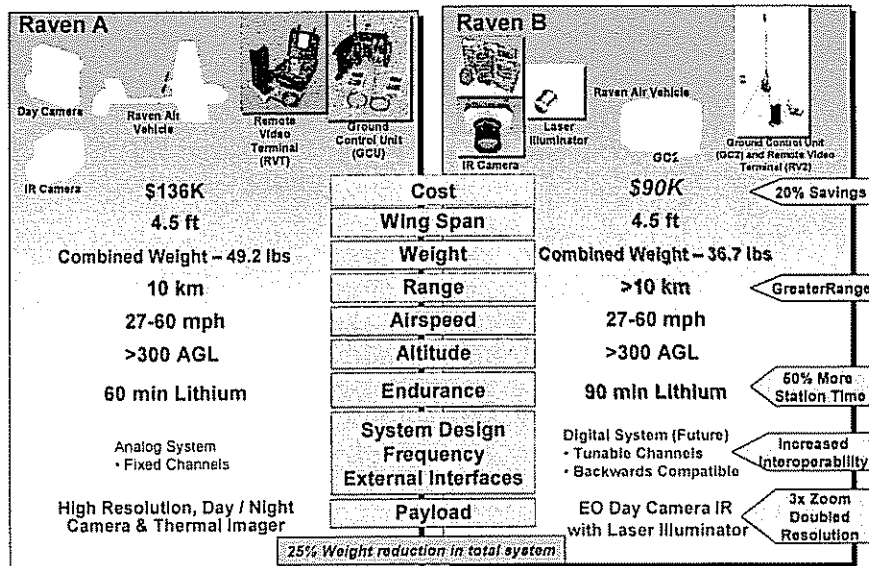
DoD efforts to reduce the number of UAS and to achieve commonality, interoperability and standardization

The Department is focused on meeting the warfighter's UAS needs and doing so as effectively and efficiently as possible. The Department's UASs provide an increasing percentage of ISR capability. Our goal is to provide this capability with more common platforms to increase interoperability and reduce acquisition and support costs. Examples of the Department's efforts to increase commonality during the past year include:

- **Common Small UAS (SUAS):** The Army, Marine Corps, and the Special Operations Command are all transitioning from the Raven A, Pointer, and Dragon Eye SUAS to the Raven B SUAS. The Air Force has also bought Raven Bs. The Army's Raven B was competitively selected in October 2005 and began fielding in 2006. The Raven B's improvements include: an improved day camera with a wider field of view, increased resolution, and a 3X digital zoom; an infrared camera with a laser illuminator (25 foot diameter spot marking capability); and improved ground control and communication components that weigh only 14 pounds. (vs. 27 pounds.). In addition to the improved capability, the Raven B systems' cost is significantly lower. A Dragon Eye and Raven A system includes three aircraft and ground support equipment and costs approximately $135,000. Raven B systems are being procured today at a cost of about $90,000, and could go lower with larger order quantities. Figure 1 compares Raven A with Raven B.

Figure 1 (Source USSOCOM).

Raven A to Raven B Comparison

Raven A	Specification	Raven B	
$136K	Cost	$90K	20% Savings
4.5 ft	Wing Span	4.5 ft	
Combined Weight – 49.2 lbs	Weight	Combined Weight – 36.7 lbs	
10 km	Range	>10 km	Greater Range
27-60 mph	Airspeed	27-60 mph	
>300 AGL	Altitude	>300 AGL	
60 min Lithium	Endurance	90 min Lithium	50% More Station Time
Analog System · Fixed Channels	System Design Frequency External Interfaces	Digital System (Future) · Tunable Channels · Backwards Compatible	Increased Interoperability
High Resolution, Day / Night Camera & Thermal Imager	Payload	EO Day Camera IR with Laser Illuminator	3x Zoom Doubled Resolution

25% Weight reduction in total system

- **Common Tactical UAS:** The Marine Corps planned to upgrade its Pioneer UAS in FY2007, but recently decided to replace their Pioneer systems with Shadow, the Army's tactical UAS. Also in FY2007, the Department of the Navy combined its Marine Corps Tier II and Navy Small Tactical UAS programs as a new start for FY2008. For greater interoperability with the Army and other Marine Corps UAS, the Marine Corps plans to operate its Tier II UAS with the Army One System Ground Control Station (OSGCS). The Army will use the OSGCS to control all its tactical UAS, including Hunter, Shadow, and Air Warrior.

UAS with Common Components:

- The Army's Future Combat Systems Class IV UAS program is leveraging the Navy's Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle (VTUAV) system (Fire Scout). The Army and Navy are modifying the same manned aircraft, the Schweizer 333 helicopter. Coordination between the two program offices is on-going to investigate

potential cost savings where system commonalities and common logistics support can be identified.

- The Department also believes there are cost saving opportunities between the Army's Warrior UAS and the Air Force Predator UAS programs. During the 2006 Quadrennial Defense Review deliberations, the Joint Capability Enabler Integrated Product Team recommended combining similar capability programs into more common acquisition programs, and the Army Warrior and the Air Force Predator UAS were identified as potential candidates. In November 2006, the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) requested that the Army and the Air Force collaborate on the two programs, and work towards a short-term goal of common aircraft, propulsion and avionics. The Under Secretary believes there is a real window of opportunity for the Department to reduce unit acquisition costs through economies of scale and less duplication of effort while improving interoperability, system performance and flexibility.

As you can see, the Department continues to strive for greater commonality through both common solutions and common components.

Standardization for UAS comes through the NATO Standardization Agreement 4586. Unmanned Ground Vehicles, Unmanned Surface Vehicles, and Unmanned Undersea Vehicle standardization is achieved through the Joint Architecture for Unmanned Systems. These two standards have established the standardization anchors for the air, land and maritime unmanned communities. An OSD sponsored, industry supported effort is also underway to harmonize these two standards enabling greatly improved interoperability among unmanned systems.

The above description discusses the Department's efforts toward commonality and interoperability with the focus on combat operational capability. Another facet of interoperability is that related to the integration of unmanned aircraft systems with manned aircraft in the National Airspace System. The Department, in coordination with the Federal Aviation Administration, is working to develop and validate standards to maximize the effectiveness of unmanned aircraft systems operating in the National Airspace System in support of homeland defense and disaster support to civil authorities.

DoD efforts to diversify suppliers and encourage participation and ensure access of small businesses and non-traditional suppliers in ISR programs

The Department is continuing to ensure the maintenance of the ISR industrial base. The growth in the Defense budget for UAS acquisition is an example of the importance of this sector to the Department. In FY2000 the budget contained approximately $200 million dollars for UAS. Based on the Presidents Budget for 2008, funding for UAS development and procurement will exceed $3 billion annually by 2010. As the UAS budget grows, the revenues accrued by small businesses and non-traditional suppliers will also grow.

Today, the Military Departments have a force of over 3400 small UA and over 500 tactical and theater-level UA supporting military operations worldwide. This is noteworthy when one recalls that the Department operated only one UAS type in support of Operation DESERT STORM in 1991; and as late as 2000, we had less than 50 operational tactical UA systems. We are buying more systems, and providing more capability to the warfighter. It is important to note that UA come in a wide variety of sizes and with differing capabilities and performance characteristics. This characteristic has led to the growth of the industrial base, one that includes non-traditional defense industry. In fact, most of the Department's small and tactical UA are produced by such companies.

The Department's investment in this innovative technology has led to growth in both the variety and number of capabilities provided by unmanned systems. In the past, UAS programs evolved into operational systems from technology demonstrations that involved limited competition and a relatively small supplier base. Today's programs are openly competed providing access to small businesses and non-traditional defense contractors. Frequently, small businesses and non-traditional suppliers specialize in niche technology not always offered by traditional suppliers. Significant effort is made to leverage the ingenuity of non-traditional ISR suppliers. The rapid fielding of the Air Force ROVER and the Army's One System Remote Video Terminal handheld video terminals was made possible in this manner. These systems allow tactical soldiers on the ground to see the UAS full-motion video previously only seen in the theater command center.

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The rapid growth of the Department's UAS provided challenges in both acquisition and operations. The use of non-traditional ISR suppliers for UAS is one method used to meet the acquisition challenge; by-products are a broader industrial base, innovation, increased competition, and reduced costs. This technology provides the DoD, and other government agencies, with a powerful capability and has allowed these benefits to accrue. Participation of a diversified supplier base is key to meeting this challenge.

DoD views on section 941 of the fiscal year 2007 National Defense Authorization Act

Section 941 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Public Law No. 109-364, requires the Secretary of Defense to submit a report to congressional defense committees containing the Department's unmanned systems policy and implementation plan.

The Department initiated activities to address unmanned policy, planning, and assessment. Although not yet complete, the Department made significant progress in addressing section 941. An integrated Unmanned Systems Roadmap is being drafted with contributions from all Military Services and Combatant Commanders for all unmanned domains (land, sea, and air). This Roadmap, which we expect to publish on or about August 31, 2007, addresses policy, congressional direction, technology enablers, organizational structure, goals and objectives for unmanned systems, and schedules for introducing unmanned systems into the force structure. Additional effort is still required by the Department to respond fully to all the elements of section 941, including the requirement for a certification that an unmanned system is incapable of meeting a manned system's program requirements. We are working with your staff to refine the report to address your concerns. We anticipate submitting the report to the Committees no later than 30 September 2007.

Current views on the efficacy of the U-2 aircraft.

The U-2 has been operating at a high operations tempo in Southwest Asia for more than 6,000 days performing the high-altitude-ISR collection and dissemination mission. It continues to provide critical intelligence at every echelon of command. As part of the Department's modernization and recapitalization effort, the Global Hawk Unmanned Aerial System (UAS)

Program is expanding its capabilities by adding signals intelligence (SIGINT) and Multi-Platform Radar Technology Insertion Program (MP-RTIP) sensors to the aircraft. As more RQ-4 Global Hawks come on line and their multi-intelligence (imagery and signals) capabilities are fielded, the Department will retire U-2 aircraft. Future investments will replace and extend the multi-intelligence capabilities currently provided by the U-2. The FY 2008 budget requests for these programs were formulated to provide the foundation for this transition from the U-2 to RQ-4 in order to satisfy Combatant Commander's high-altitude-ISR requirements, and to ensure the same level of ISR capacity historically provided by the U-2 will be delivered in the future.

Rationale for Termination of the E-10A Program

The E-10A was envisioned as the nation's future capability against cruise missile detection as an integrated ISR and Battle Management Command and Control platform. The 2006 Quadrennial Defense Review (QDR) recommended removal of the E-10A production funds; however, it endorsed the technology development with test flights in 2010-2011, as a basis for future decisions on the program. Thus, the FY 2007 budget only funded the E-10 Technology Development Program and the MP-RTIP sensor development, and no operational capability after 2011. Based on QDR guidance and overwhelming fiscal pressures, the Air Force canceled the E-10A and its associated MP-RTIP Wide Area Surveillance radar development. Therefore, the FY 2008 budget only funds the smaller advanced MP-RTIP variant for Global Hawk.

When installed on the Global Hawk Block 40, MP-RTIP will provide robust Ground Moving Target Indicator and Synthetic Aperture Radar imaging in addition to current capability. The weight and power restrictions of the platform, however, drive the smaller Global Hawk Radar design and limit its performance.

Conclusion

Mr. Chairman, this concludes my prepared remarks addressing the topics you asked me to focus on. Again, thank you for the opportunity to testify. I am prepared to entertain any questions you might have.