**PRESENTATION TO THE TERRORISM, UNCONVENTIONAL THREATS
AND CAPABILITIES SUBCOMMITTEE**

COMMITTEE ON ARMED SERVICES

UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: INFORMATION TECHNOLOGY ISSUES

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Chairman Saxton, Congressman Meehan, and Members of the Sub-Committee:

Thank you for this opportunity to appear before you to discuss the Air Force's

information technology (IT) budget and alignment with Quadrennial Defense Review

(QDR) guidance.

INTRODUCTION

The Chief of Staff and Secretary of the Air Force have identified three areas of

emphasis to shape our service; IT investments will have a significant impact on each of

them. Winning the Global War on Terrorism (GWOT) is our top priority, and the Air

Force is committed to making the necessary IT investments to support our joint and

coalition forces in this long war. As we face the challenges of the GWOT, taking care of

our people will remain a high priority. Our ability to recruit, retain, and develop a

qualified and diverse force is critical to successfully executing current and future

missions. Finally, we must generate the savings needed to recapitalize and modernize

our force by reengineering our processes to become more effective and efficient.

The FY07 IT budget reflects these priorities and the strategic direction outlined in

the QDR. The Air Force is increasing expenditures in national security systems, shifting

our portfolio to meet irregular, catastrophic, and disruptive challenges while sustaining

capabilities to address traditional challenges. The IT investments highlighted in this

testimony reflect the Air Force's commitment to defeating terrorist networks at home and

abroad while defending the homeland.

PROGRESS TOWARDS ACHIEVING NET-CENTRICITY

As we create and leverage a net-centric environment, our Soldiers, Sailors, Airmen and Marines are more powerful and effective than ever before, largely because we know more about our battlespace than ever before. As we continue to evolve our capabilities, so does our enemy, and the demand for speed and precision increases. We collect much more data than we used to – we have Global Hawks flying 22-hour reconnaissance and surveillance missions and dozens of Predators collecting imagery and sending it around the world. Increasing speed and precision requires unprecedented knowledge and understanding of the battlespace. Information technology is the key enabler in maintaining our edge.

The fiscal year (FY) 2007 budget reflects investments that will help the joint force realize the net-centric goals outlined in the QDR. The $7.2B FY07 IT budget request is a $91M increase from FY06 – less than inflation. Adjustments are focused on providing increased command and control, information assurance, infrastructure, and operational support capabilities to the warfighter.

Command and Control

Integrating advanced command and control capabilities to improve joint warfighting is at the core of QDR calls for enhanced networked-based capabilities and information fusion. Our Air and Space Operations Center Weapons System (AOC) is the focal point for command and control of air and space power. Capabilities available within an AOC include improved situational awareness and automation of daily air tasking orders. Focused technology investments in the AOC have accelerated our decision-cycle through machine-to-machine connectivity and improved information fusion. Our joint and coalition team has flown over 400,000 sorties in support of

Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) – all controlled from the Al Udeid AOC. The AOC has produced air tasking orders controlling air missions for airlift and aero medical evacuation, close air support protection of ground troops, and precision fire support and sensor capabilities. In a homeland defense role, our combined AOC provides command and control of the North American Air Defense (NORAD) air sovereignty mission for the continental United States. This includes supporting Operation Noble Eagle, counter drug surveillance operations, and disaster response.

In the FY07 budget submission, the Air Force requested $259M for the AOC. This is a $20M increase from the FY06 budget to modernize and integrate over 47 legacy systems. To keep AOC evolution on track to meet needs identified by the joint warfighter, the program plans to build on its current capability and develop a series of new capability increments. Two major acquisition blocks are planned to meet AOC requirements.

The first block will standardize AOC configurations, with limited-scope upgrades to hardware and software to meet the need for interoperability, supportability, usability, and compliance with changes to published technical standards. This block will be fielded in two increments. The first will begin fielding in FY07, followed by another in FY08.

A second block focused on integration will reduce the AOC footprint and manning, while simultaneously increasing the speed of command. Building from the existing fielded baseline, we will rapidly improve warfighting capability by integrating applications, services, web-based tools, and infrastructure using a service oriented

architecture. Our investments will improve combat effectiveness by enhancing the ability to dynamically command and control operational military forces.

Emerging technologies are showing tremendous potential for improving our command and control capabilities. The Remote Operations Video Enhanced Receiver (ROVER) allows us to share targeting video between pilots and Soldiers, Marines, and Airmen on the ground. Using ROVER, Marines are talking pilots onto their target in under five minutes. Without the capabilities provided by ROVER this process took in excess of 30 minutes. ROVER has proven to be invaluable, increasing the speed and lethality of air power across a broad range of activities, from tracking and targeting insurgents to locating improvised explosive devices.

Information Protect and Transport

Decision dominance in command and control relies on accurate, trusted, and secure information in a net-centric environment. The QDR highlights the need to design, operate, and defend our infrastructure to ensure continuity of joint operations – at home and abroad. The DoD networks handling our information are attacked every day. In light of this threat, we must field networks capable of adapting to adversary attempts at destroying, disrupting, corrupting, or denying our ability to operate. The Air Force's investments in technology to effectively transport and protect information support these goals.

The Air Force Cryptographic Modernization initiative is part of a DoD-level effort to address existing shortfalls and lay the foundation for transforming our cryptographic capabilities. Cryptographic modernization will lower production and support costs by replacing older equipment with smaller, more adaptive and capable

equipment. Existing cryptographic systems do not adapt well to the mixed environment of United States and coalition operations.

The Air Force FY07 budget continues to deliver critical capabilities across the Air Force within the triad of network management, defense, and transport. As part of network defense, the Combat Information Transport System (CITS) will provide robust enterprise management tools for the Air Force Network Operations and Security Center (AFNOSC) and implement Integrated NOSCs (I-NOSCs). These investments will enhance attack sensing, warning, prevention, and assessment along with post-attack recovery and reconstitution. For example, in May 2004 the Sasser Worm disrupted the World Wide Web and degraded Air Force mission support systems. Within hours, computer network defense technologies blocked all traffic over the affected port. Under an I-NOSC construct, the Air Force will be able to rapidly respond to similar threats – in a matter of minutes. As a component of the larger communications and information strategic transformation, the I-NOSC initiative reduces our footprint from 17 sites to 4 in FY07, providing unity of command, unity of effort, and increased process and personnel efficiencies.

Additional improvements to network defense include an automated software patching capability as a component of the DoD plan for vulnerability management. The three-tiered system will ensure compliance with all applicable security policies before allowing computers to connect to the AF enterprise. CITS will also deliver capabilities for critical system back up, continuity operations, performance monitoring and outage reporting. Together these capabilities will significantly improve cyberspace security, reinforce joint net-centric capabilities, and reduce total cost of ownership.

The Air Force has targeted more than $450M toward protecting and defending information in our FY07 budget. This investment is focused on improving threat and incident analysis, network monitoring, and providing the responsiveness required in an advanced Global Information Grid (GIG) environment. The Air Force's FY07 computer network defense funding increases will enhance critical support of counterterrorism, homeland defense, and warfighting operations. Of this total investment $243M will be directed toward our Cryptographic Modernization. The Air Force's investments in this area are leveraging Department-wide efforts to secure the GIG as the core enabler of net-centric operations.

Several emerging technologies are showing tremendous potential for improving our information transport capabilities. In April 2005, a helicopter crashed in a dust storm near Ghanzi, Afghanistan, killing 18 people. Using the capabilities provided by the Joint Radio Relay (JR2), we passed critical information about the downed helicopter to aircraft performing combat support in the area. The capabilities provided by JR2 enabled us to immediately begin search and recovery. JR2 has not only proved its worth in supporting rescue operations, it is used every day to help control over 80% of the aircraft flying in Operation Enduring Freedom. JR2 has eliminated the need to dedicate an airborne warning aircraft to provide this capability, saving $240,000 per day.

During the Navy's Trident Warrior 2005 exercise, a simulated terrorist convoy and mobile surface-to-air missile system was detected, identified, and tracked by joint and coalition assets using our Net-Centric Collaborative Targeting (NCCT) capability. NCCT rapidly fused disparate sensor data for each target into a single composite track

and transmitted it to an AOC targeting cell. By rapidly producing actionable intelligence,

NCCT shortened the decision-cycle to engage the target.

PROGRESS ON RESHAPING THE DEFENSE ENTERPRISE

Accurate and trusted information is an enterprise asset in both combat operations

and business support activities. We are making significant progress in breaking down

legacy stove-piped systems and improving information sharing across the enterprise. In

response to the 2005 National Defense Authorization Act, the Defense Business Systems

Modernization Committee (DBSMC) improved coordination across the Department. The

ability to coordinate across services was instrumental in the Air Force's completion of 28

Clean Audit milestones. This contributed to the DoD's "green" score for "progress" in

improved financial performance, supporting the President's Management Agenda.

Operational Support

One area where IT is demonstrating tremendous potential as a force-multiplier is

in business support. Our Air Force logistics and commodities activities are supported by

over 650 legacy stove-piped systems and nearly 250,000 personnel. Our Expeditionary

Combat Support System (ECSS) investments will consolidate approximately 580 systems

into one common framework and position the Air Force to begin redirecting more than

$340M in annual cost savings starting in 2010.

ECSS improves warfighter capabilities by focusing on synchronized

operations/logistics planning and execution, improved command and control, increased

worldwide visibility of assets and the use of best practices. These processes will be

enhanced by focusing on process reengineering and enterprise data integration through

IT. ECSS will be based on a core commercial off-the-shelf (COTS) enterprise resource

planning package and augmented by COTS applications in business value areas where performance goals dictate. ECSS will be fully compliant with architectural standards and guidelines at the Federal, Department, and Air Force levels. ECSS will involve significant business process reengineering, change management, and training across the AF logistics domain.

In our FY07 budget submission the Air Force requests $212M for the ECSS, a $132M increase from the FY06 budget. Growth in our FY07 request is consistent with the FY06 submission when adjusted for delays due to contract protests and the alignment of ECSS development with RDT&E. Beyond FY07, growth will be minimal ($17M) with anticipated divestiture of legacy programs beginning in FY10.

The Air Force is committed to cost savings on IT capabilities and affording opportunities to small businesses. Since August 2003, the Air Force has saved over $56M on buying 216,000 computers by consolidating enterprise-wide requirements into a single purchase. Our most recent buy saved an estimated $2.6M with 20% of purchases from qualified small business vendors. To support our increasingly network-centric operating environment, we awarded the Network-Centric Solutions contract to ensure that communications capabilities are standardized and interoperable. Of the companies awarded under the NETCENTS contract, half are small businesses. In the first year of the contract, small businesses won nearly 58% of the total dollars awarded.

TECHNICAL, FUNDING, AND ORGANIZATIONAL OBSTACLES

Establishing a net-centric environment requires robust global network connectivity to transfer voice, video, and data streams supporting the entire range of military actions. Although not part of the Air Force's IT budget, one of the lynchpin

technologies that our future IT capabilities will depend upon is the Transformational

Satellite (TSAT). TSAT will deliver secure, reliable, high-bandwidth communications,

and our capability to field such technologies not offered commercially is increasingly

critical. The services offered by TSAT will provide benefits beyond the Air Force,

delivering capabilities essential to the Army's battle command and control vision. The

GAO recently endorsed our approach to managing the technology, and the program has

been further refined to reflect a block delivery approach.

CONCLUSION

Investments in integrated IT solutions will generate cost savings across the Air

Force. As IT delivers the capability to execute more efficient and effective processes, we

will divest costly legacy programs, driving down the total cost of ownership. Doing so

will allow the Air Force to redirect capital and maintain our technological advantage.

The Air Force is committed to winning the Global War on Terrorism through

focused investment in net-centric technologies. These investments will provide a

comprehensive information capability enabling the joint team to create the right effect at

the right time and place in the battlespace.