

**RECORD VERSION**

**STATEMENT BY**

**LIEUTENANT GENERAL N. ROSS THOMPSON III  
MILITARY DEPUTY TO THE  
ACTING ASSISTANT SECRETARY OF THE ARMY  
(ACQUISITION, LOGISTICS AND TECHNOLOGY)  
AND DIRECTOR, ACQUISITION CAREER MANAGEMENT**

**BEFORE THE**

**SUBCOMMITTEE ON AIR AND LAND FORCES  
COMMITTEE ON ARMED SERVICES  
UNITED STATES HOUSE OF REPRESENTATIVES**

**ON**

**ARMY ACQUISITION PROGRAMS AND STRATEGY**

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**Introduction**

Mr. Chairman, Congressman Saxton, and distinguished Members of the Subcommittee on Air and Land Forces. Thank you for this opportunity to discuss Army acquisition programs and strategy and our mutual efforts to ensure that America's Army remains the preeminent landpower on earth. It is my privilege to represent Army leadership, the military and civilian members of the Army acquisition workforce, and the more than one million Soldiers – Active, Guard and Reserve – who comprise our Army and rely on us to provide them with world-class weapon systems and equipment.

We are a high technology Army. Our Soldiers are the most technologically advanced and capable in the world. This is possible in large measure, Mr. Chairman, because of the wisdom, guidance, and strong support we receive from this Committee and Congress. On behalf of our courageous, dedicated Soldiers and the families who support them, we thank you.

Our most important asset is our people. There is great concern about the steady decline in the number of Army acquisition workforce members while the workload continues to increase. Currently, there are less than 43,000 civilian and military members of the Army acquisition workforce. Still, this workforce manages roughly 25 percent of the Army's current budget, and a diverse portfolio of more than 600 programs that range from the Abrams tank to the Army combat uniform; from the Apache Longbow helicopter to the advanced combat helmet; and from life-saving medical equipment to our ongoing chemical demilitarization operations. Within the next few years, including the potential of early

retirements, almost one-half of all acquisition workforce civilians will be eligible to retire. One of our most critical issues is the age and size of the workforce. We need a well-trained and educated workforce that is focused on our mission to provide the Soldier with world-class capabilities.

America has been at war for more than six years. Our Army has been a leader in this war and has been fully engaged in Iraq, Afghanistan, and in nearly 80 countries worldwide. As we look to the future, we believe the coming decades are likely to be ones of persistent conflict – protracted confrontation among state, non-state, and individual actors who use violence to achieve their political and ideological ends. In this era of persistent conflict, the Army will continue to have a central role in implementing our National Security Strategy.

To achieve balance, the Army will require sustained, timely, and predictable base budget funding. The Fiscal Year 2009 (FY09) President's Budget requests \$140.7 billion for the Army. This request is necessary to support current operations, fight the wars in Iraq and Afghanistan, sustain the All-Volunteer Force, and prepare for future threats to the Nation. The FY09 President's budget requests \$24.6 billion to continue procurement of weapon systems and equipment for our Army, which include aircraft; missiles; ammunition; weapons and tracked combat vehicles; tactical and support vehicles; and communications and electronics. In addition, the FY09 President's Budget requests \$10.5 billion for Research, Development, Test and Evaluation.

### **Acquisition Programs and Strategy**

While fully engaged in the war on terror and sustaining the range of our global commitments, there is an increased emphasis on modernization and our plans for the future. Our strategy is designed to meet the Army's current and future equipping requirements through continuous modernization. Let me address, as requested, the following specific strategies.

The **Joint Light Tactical Vehicle (JLTV)** is a family of vehicles that will replace the High Mobility Multipurpose Wheeled Vehicle (HMMWV). It is a Joint Army/U.S. Marine Corps and U.S. Special Operations Command program that is currently in the Technology Demonstration (TD) phase. In September 2007, the Defense Acquisition Executive directed the program to begin at Milestone A with a robust TD phase to reduce System Design and Demonstration phase activities, costs, and technology risk. As planned, JLTV will provide significant and revolutionary increases in protection, performance, and payload capabilities to our warfighters starting in 2015. The Joint Light Tactical Vehicle has been designated as a Future Combat Systems complementary system.

The Army's **Science and Technology (S&T) programs for rotorcraft** emphasize investments in technologies that enhance aircraft survivability; reduce Operating and Support costs for both Current and Future Force airframes; and pursue greater manned-unmanned system teaming capabilities. The S&T program also supports the National Rotorcraft Technology Center, a partnership of government, industry, and academia where jointly funded cooperative research and development initiatives address U.S. rotorcraft competitive and military readiness issues.

Despite near-term demands for resources to support the war on terror, we have been able to sustain our technology investments for rotorcraft. Since FY06, the Army has maintained an average of 20 percent real growth in aviation S&T funding. The last major reduction in aviation S&T occurred with the cancellation of the Comanche helicopter program and its companion S&T program, the Unmanned Combat Armed Rotorcraft.

In FY05 through FY07, a Joint Heavy Lift (JHL) Concept Refinement effort was conducted that resulted in a significant update to the Minimum Performance Specification for this proposed capability – one that provides not only mounted vertical maneuver for medium weight armored forces, but also provides aerial sustainment to the point of need, the ability to operate over tactical and

operational distances to/from land or sea bases, and the ability to be self-deployable. The overall assessment by the Army S&T community is that a heavy lift Vertical Take Off and Landing (VTOL) solution is technically feasible.

The JHL Concept Refinement effort formed the basis for the JHL Initial Capabilities Document (ICD) which has completed initial Joint Staff and Service review. As a result of this staffing, the Chief of Staffs for both the Army and Air Force have agreed to "merge" the JHL ICD with the Air Force's notional requirements for its Advanced Joint Air Combat System into a single ICD that is to be presented to the Joint Requirements Oversight Council by the fourth quarter of FY08. They have also agreed that the "merged" ICD (now called Joint Future Theater Lift) will include VTOL and Short Take Off and Landing (ability to land and take off within 1,500 feet over a 50 foot obstacle) as the desired and required capabilities, respectively.

An Analysis of Alternatives/Evaluation of Alternatives is in the process of being established at the Joint level to assess the viable materiel options for addressing the Joint Future Theater Lift requirements. Decisions on the way ahead will be significantly influenced by the outcomes of that process.

The Army's strategy for **research and development focuses on investments that provide a wide spectrum of lightweight individual Soldier equipment**, in particular lightweight ammunition, body armor, night vision, and other weight-reduction research.

**Lightweight Ammunition** - For the past four years the Joint Service Small Arms Program has managed the Lightweight Small Arms Technology effort -- a joint Army, Navy, and Marine Corps investment to demonstrate ammunition and weapon concepts that weigh ~40 percent less than current systems. The ammunition alternatives being investigated provide weight reductions of 35 percent to 50 percent. However, both ammunition concepts (case-telescoped and caseless) require design of a new weapon and a change to the ammunition industrial base. A decision to adopt these technologies has not yet been made.

**Body Armor** - The need for increased protection (to mitigate combinations of ballistic, blast, fragmentation threats, and/or provide increased area of coverage) must be balanced against human performance degradation (heat stress and mobility) due to increased weight and bulk. This dynamic is a constant challenge when increasing the performance levels of personnel armor. Performance enhancements are being researched for advances in materials such as high performance fibers, transparent polymers, ceramics, composites, better weave patterns, and improved design tools and performance modeling that assess trade-offs in the fundamental materials and armor formulations. Improved integrated system designs that reduce overlap and inherent design inefficiencies are also being studied. One such result was the fielding of the Improved Outer Tactical Vest, which increased the area of protection and reduced weight by eliminating overlap of materials and improving system design.

**Night Vision** - Efforts are ongoing to reduce the weight and power consumption while increasing performance and range of existing systems such as Thermal Weapons Sights and Lightweight Laser Designator Rangefinder through Advanced Integrated Circuit Designs and technology insertions to eliminate obsolete components. Combining image intensification and infrared sensors into single devices, while reducing weight and power requirements, is being achieved through advances in technology.

**Other Weight Reduction Research:**

Soldier Power - A variety of small, lightweight, low cost power sources are being developed to reduce the weight of Soldier power by up to 50 percent or extend the mission time for Soldier and sensor applications with the goal of reducing the re-supply quantity, weight, and costs. Technologies being investigated include: conformal (mates with body armor), rechargeable Soldier system batteries; half-size/2X energy primary batteries; hybrid fuel cells; and JP8-powered Soldier battery chargers.

Ballistic Goggles - Efforts are ongoing to achieve a 70 percent improvement in the ballistic performance of transparent tactical eyewear protection with a 52 percent reduction in weight for one-quarter inch thick face shields.

Handheld Displays - The ongoing technology development for flexible displays will result in rugged, low power sunlight-readable displays at a 60 percent reduction in weight and reduced volume compared to current glass displays.

Efficient System Designs – Our investment strategy regards the individual Soldier and his/her equipment as a system. The Army has established the Soldier as a System to find ways to increase the capabilities of our Soldiers while reducing weight. Recent examples of successful transitions from our investment strategy include: new body armor that increases area of coverage while reducing the weight by three pounds in medium sizes; reduced weight of our thermal weapons sights to include reducing by one-half the number of batteries required to power the sights; and reduced weight in the M240 machine gun by five pounds. Similarly, Soldier feedback and engineering changes reduced the weight of Land Warrior systems deployed to Operation Iraqi Freedom. The Next Generation Land Warrior systems that will be fielded to the 5/2 Stryker Brigade Combat Team at Fort Lewis, Washington, and the Army Evaluation Task Force at Fort Bliss, Texas, will reduce the system weight even more. This, in conjunction with the weight reductions in sensors, body armor, and weapons, makes the lighter-weight, more capable Soldier as a System a reality.

The **Future Combat Systems** (FCS) program is structured to bring advanced capabilities to today's force as rapidly as possible in a fielding concept known as "Spin Out." Several "FCS like" capabilities are already in use in combat operations in Iraq and Afghanistan and are protecting our Soldiers today. These technologies include (1) the Frag Kit 5 armor protection used on Up-Armored HMMWVs; (2) the Micro Air Vehicle, an early precursor of the FCS Class 1 Unmanned Air Vehicle, which has been highly effective by Navy and Army units in explosive ordnance disposal operations in Iraq; (3) the Packbot

currently used by Soldiers and Marines in Iraq and Afghanistan is the precursor to the FCS Small Unmanned Ground Vehicle; and (4) the Excalibur artillery round, used successfully during Counter Insurgency Operations in Iraq, is being adapted for use with the FCS Non-Line of Sight Cannon.

The first FCS capabilities will be provided to current force brigade combat teams beginning in 2011 as part of Spin Out 1. These capabilities represent significant strides in hardware, software, and network development. The FCS network represents the greatest advancement in Tactical Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance that the Army has ever pursued. The Spin Out strategy consists of prototypes fielded to the Army Evaluation Task Force (AETF) for evaluation. In fact, Spin Out 1 technology is currently in the hands of combat-experienced Soldiers of the AETF, preparing for evaluation at Fort Bliss, Texas, and White Sands, New Mexico.

Current FCS Spin Out 1 equipment includes: Non-Line of Sight Launch System (NLOS-LS), Urban Unattended Ground Sensors, Tactical Unattended Ground Sensors, and FCS Network Integration Kits for Abrams, Bradley, and HMMWV platforms. The FCS program currently has 75 tests ongoing throughout the United States. Each test is a precursor to the fielding of capabilities to Soldiers.

Success of the Army's Battle Command Strategy is indispensable to our future operations. Central to our strategy is the **Joint Tactical Radio System** (JTRS), a family of ground, airborne, and maritime domains of common software-defined radios that provide seamless network connectivity throughout the battlefield. We will begin to see the initial capabilities of this revolutionary modernization effort when Spin Out 1 delivers a Sensor-to-Soldier link through the network.

The Ground Mobile Radio (GMR) program reported a significant Nunn McCurdy breach to Congress in January 2008. The breach was caused by an increase in GMR costs. This resulted from a reduction in the quantities the Services plan on procuring and design and development challenges that caused

an increase in cost to the Line Replaceable Unit for the radios. These costs were included in the revised Acquisition Program Baseline which was approved in January 2008. There has been no cost growth since the revised program baseline.

The Army has five distinct **rapid acquisition processes** to provide robust capabilities to our warfighters:

- (1) Joint Urgent Operational Needs Statement (JUONS);
- (2) Operational Needs Statement (ONS);
- (3) Joint Improvised Explosive Device Defeat Organization (JIEDDO);
- (4) Joint Capabilities Integration and Development System (JCIDS) that we refer to as the “PM Informal” process; and
- (5) Rapid Equipping Force (REF).

The JUONS process provides rapid acquisition for requirements that support more than one military service, and it begins when commanders submit a documented shortfall of capability request to the Joint Staff. Once the request is validated and staffed, if the request can be potentially mitigated via a materiel solution, the request for a materiel solution is vetted through the Services to determine if any Service has a potential materiel solution to address the need or if a materiel solution will have to be developed to address a capability gap. The timeline from capability gap shortfall identification to providing a potential materiel solution is dependent on two variables: how long it takes to validate and staff the request; and how long it takes to develop, test and produce the materiel solution.

The validation and staffing process normally takes 30 to 45 days, but for certain urgent requirements, the process can take as little as 48 hours. The development of a materiel solution has more variability due to several factors, including: the materiel solution’s technical complexity; whether or not a potential materiel solution exists or is available; whether an appropriate solution must be developed; what complexities are associated with production of a materiel solution; and what quantities are needed to fulfill the requirement.

The ONS process is similar to the JUONS process with the exception that the requirement validation remains within the Army, and once validated, is resourced via the Army Requirements and Resources Board. Like JUONS, ONS has two variables: the timelines associated with ONS validation and staffing; and the timelines associated with developing, testing and producing the materiel solution. ONS requirements can be filled in as little as 30 days if the unit is already deployed or is preparing to deploy and a materiel solution exists. Otherwise, the ONS process can take up to 120 days.

The JIEDDO process must provide materiel solutions that mitigate IED threats worldwide. Requirements typically arrive from the JUONS process and, consequently, share that process' staffing and validation timelines. JIEDDO, like REF, has dedicated funding, so once a materiel solution is identified, acquisition and fielding can begin without identifying a funding source and redirecting the necessary resources. Timelines from receipt of a validated requirement to initial fielding may range from 180 to 360 days. The JIEDDO maintains "corporate" knowledge of IED defeat technologies and can identify existing solutions, or develop new solutions quickly by exploiting their extensive knowledge database.

The JCIDS/"PM Informal" process provides rapid materiel acquisition and fielding by recognizing that current Soldier needs may be similar to an existing materiel acquisition program. The process may be initiated by a call from a field commander to a PM describing the requirement and requesting assistance. If the requirement can be met through a minor modification to an existing program, or by a parallel effort to an existing program, the effort may be started by the PM while a formal ONS or other requirement document is initiated. This provides multiple benefits of concurrent requirement development, solution engineering, and acquisition. The PM may use his authorized funding or request additional funding from the Army Requirements and Resources Board.

The REF process starts when forward teams identify and evaluate needs and desired capabilities for the deployed forces they are supporting. The REF develops and rapidly acquires solutions while documenting a streamlined methodology for acquisition with the Army Acquisition Executive's cooperation

and oversight. The REF works within Army acquisition policies and acquisition law. To date, the REF has introduced more than 325 different types of equipment to units deployed in Operations Enduring and Iraqi Freedom.

## **Conclusion**

Equipping the Army is not just an Army-unique challenge; it is one with National security interest and implications. It must be viewed and considered in that overarching context. The Army is simultaneously conducting wartime operations and preparing for future commitments. Our challenge is to balance these two requirements to ensure that we can defend the Nation today while preparing to do so tomorrow.

I look forward to working with this Committee and Congress to ensure that our Soldiers have the finest weapon systems and equipment our Nation can provide. Our young men and women in uniform and those who lead them are depending on us.

Thank you for the opportunity to appear before the Committee.