STATEMENT BY

LTG RICHARD A. CODY
DEPUTY CHIEF OF STAFF, G-3
UNITED STATES ARMY

BEFORE THE

TACTICAL AIRLAND SUBCOMMITTEE
ARMED SERVICES COMMITTEE
UNITED STATES SENATE

ON

UNITED STATES ARMY AVIATION

SECOND SESSION, 108TH CONGRESS

MARCH 30, 2004

STATEMENT BY

LTG RICHARD A. CODY
DEPUTY CHIEF OF STAFF, G-3
UNITED STATES ARMY

INTRODUCTION

Chairman Sessions, Senator Lieberman, distinguished members of the committee, we appreciate the opportunity to appear here today to provide an update on the state of Army Aviation and how we intend to continue meeting current operational requirements while we also prepare for the future.

We are witnessing historic times in our Army and our Aviation Force. As a former Division Commander for the 101st Air Assault Division and now as Deputy Chief of Staff, G-3, I can testify that our Army in general, and our aviation leaders and Soldiers are well-trained, ready, and committed. I thank this committee for your resolute support, concern, and faith in America's sons and daughters, who serve our Army and our nation. I believe you all would agree that while aviation hardware and other systems are vital components of our nation's defense, our most precious and irreplaceable assets are the great Americans operating and repairing them.

GEN Peter Schoomaker, Chief of Staff, Army (CSA), directed a top-to-bottom review of Army Aviation in August of last year. The Chief's guidance was to make Army Aviation a capabilities-based maneuver arm optimized for the joint fight with a shortened logistics tail. An Aviation Task Force was formed with a select group of aviation professionals under the leadership of MG James Thurman, Aviation Task Force Director; MG Joseph Bergantz, PEO-Aviation; and

BG Edward J. Sinclair, Commanding General, United States Army Aviation Center and School, who are in attendance today. Although the Task Force is still working through many of the details associated with the 108 recommendations required to transform this force, I will provide an overview of some key initiatives the Army will implement to prepare the force for on-going responsibilities and to pace aviation transformation relative to the rest of the Army. But first, I would like to discuss the context and present state of our aviation force and briefly highlight lessons learned from current operations.

CURRENT AVIATION FORCE AND LESSONS LEARNED

Army Aviation currently has over 450 aircraft deployed in Bosnia (SFOR-13), Afghanistan (OEF-5) and Iraq (OIF-2). Since September 2001, the operational tempo for Army Aviation is the highest it has been since the height of the Vietnam conflict. We are flying three times as many hours in support of OIF and OEF as compared to annual home station rates and the majority of those hours are under combat conditions. The contribution of Army Aviation to combating terrorism, defeating the Taliban, ousting Saddam Hussein, and preserving the peace on the Sinai, Korean Peninsulas, and in the Balkans is and continues to be a vital resource for our Combatant Commanders. However, this success has not been achieved without a price.

The Army has lost 44 aircraft (an additional 23 are pending repair analysis) in hostile and non-hostile incidents since 1 October 2001 and a total of 38 aviation Soldiers have given their lives in service to their nation and to the accomplishment of these missions. These losses have not been without

purpose. They have informed us for the future and have placed an unprecedented sense of urgency in improving our capabilities, systems, and doctrine.

Army aircraft and aircrews have performed superbly at an unparalleled pace in one of the harshest, most unforgiving environments on the planet. The environment and operational tempo have placed incredible wear and tear on our fleets. We have initiated an aggressive campaign to reset our deployed aviation systems to a higher state of readiness than when deployed. The Army is planning to expend $1.6B (FY04) to Reset 1054 aircraft as well as aviation support equipment. Reset includes special technical inspection and repair at unit locations and depot repairs for crash and battle damage aircraft. The impacts of desert-induced damage led us to fund approximately $55M (FY04) in Desert Kit improvements including aircraft engine inlet barrier filters, auxiliary power unit inlet barrier filters, OH-58D hydraulic filters, ALQ-144 filters, rotor blade protection and aircraft covers. All deploying aircraft will also receive these upgrades. The magnitude and impact of this initiative is that nearly 60% of the Army's tactical aircraft fleet is currently either in Reset or deployed.

At the end of the day, our mission is to be ready and relevant when called upon. As recently witnessed for Operations Iraqi Freedom and Enduring Freedom, there may not be sufficient time to train before we go. Therefore, we need to have trained, standardized and modular units that are fully connected to the combined arms team and joint forces.

Our aviation leaders and troopers performed admirably adjusting to ad-hoc task organizations during OIF and OEF. Today our aviation structure is designed to support five different active component divisional organizations (Air Assault, Airborne, Heavy Division, Light Division, Korea) and two different reserve component structures. Specific divisional structures led us to specific, but different aviation organizations. For example, we have 18-ship Apache battalions in Heavy Divisions, but 21-ship battalions at Corps and 24-ship battalions in the 101st Air Assault Division. We quickly discovered that 18-ship Apache battalions did not provide enough aircraft for continuous close support to maneuver commanders in non-contiguous operations. Additionally, aviation forces were lift deficient at almost every level. Our units were extremely taxed accomplishing intra-theater cargo and troop movement. Even though the U.S. Air Force provided continuous intra-theater lift support, Reserve Component C-23 Sherpa's were activated to augment CH-47 Chinooks. Sherpa's however, are payload challenged in terms of performance and internal dimensions. More utility and cargo capacity was required to support the long division maneuver from Kuwait to Baghdad. Heavy Divisions consisted of only 16 UH-60 Black Hawks for general support. With limited intra-theater lift and Corps assets already overloaded, there were minimal cargo assets to augment divisional supply requirements.

The future demands more standardized modular formations, standard operating procedures (SOPs) and joint training. Disparities in types, numbers, mission and SOPs for aircraft and their assigned units impede flexibility that is

traditionally a hallmark capability of Army Aviation. Standard basic building blocks are the first step in creating modularity. Second, these standard units must use similar SOP's. The whole concept is standardized and modular units that can "plug and play" with other units. Finally we must train more aviation at Combat Training Centers (CTC) to further strengthen our combat arms capability. Every OIF commander I have talked to has stated that the CTC prepared them for this war. The Army's CTC program is vital to the future, however we must strive to include more jointness in our training activities.

The Army must also improve on combat safety. For aviation, that includes improving the power margins required to fly at extreme altitudes similar to those in Afghanistan as well as avoid or operate in "brown-out" conditions that occur in desert environments like Kuwait and Iraq. There are materiel improvements that we intend to incorporate on our current aircraft such as "fly-by-wire" systems that provide hands-off recovery and/or landing in obscuration and low visibility conditions similar to those found in today's commercial jets.

The distances covered in today's warfight will only grow in the future. Our operations require satellite-based communications that can span the maneuver distances and varied terrain to effectively operate in a net-centric system-of-systems construct.

Of further concern is the synchronization and impact of bandwidth and frequency spectrum on what will eventually be a proliferation of Unmanned Aerial Vehicle Systems (UAVS) on the future battlefield. In Iraq, forces had a difficult time operating UAVS due to limitations in the bandwidth and limited frequency

spectrum. The Army will take a holistic approach to the development and utilization of UAVS. Next month, the Army will deploy a UAVS Task Force to the USCENTCOM Theater to study methods and procedures for more effective integration of UAVS into Army and Joint operations.

With continuing lessons learned in our ongoing combat operations, let me stress that the Army still has the best aviation forces in the world thanks to this committee and the dedication and hard work of outstanding commanders and Soldiers who are accomplishing the mission. But, we still owe them the very best equipment and training this nation can provide, now and into the future.

ARMY AVIATION AS A CAPABILITIES – BASED MANEUVER ARM OPTIMIZED FOR THE JOINT FIGHT AND LOGISTICS TAIL SHORTENED

The mission to transform Army Aviation into a capabilities-based maneuver arm optimized for the Joint fight with a shortened logistics tail requires a structure that is more modular and tailorable to support a range of missions and/or units. In addition to organizational and structure changes developed from lessons learned in current operations, Special Operations Aviation (SOA) capabilities were reviewed to determine what could be migrated into the conventional aviation force. Examples of previous SOA capabilities migrated into the regular force include night vision goggles, aviation life support equipment, and crashworthy fuel tanks. The Aviation Task Force also studied active and reserve component responsiveness in order to optimize force readiness for deployability, limit reserve activations and enhance unit and Soldier stability.

Finally, we looked at current and planned systems to determine their relevancy and synchronization in meeting Future Force requirements to include interoperability with the Future Combat Systems (FCS) and joint tactical warfighting.

Army Aviation is a unique combat element with requirements that extend across all Joint Functional and Operating Concepts. We analyzed required capabilities from joint doctrine down to the company level. This enabled us to focus on the development of basic building blocks for units. These company building blocks permit the creation of a truly capable Aviation Unit of Action (UA) with standardized formations. Based on current and projected aircraft inventories and with optimization of the force as a key parameter, we will restructure the current non-standard aviation brigades into 11 active and two reserve component multi-functional Aviation UAs. These multi-functional Aviation UAs will support four to five brigade combat teams. The Aviation UA design incorporates the lessons learned from recent operations and corrects deficiencies in our current structure by moving aviation assets closer to the warfighter.

The Aviation UA is able to organize by task, purpose, and mission. This provides several advantages over the current force structure. The new organization now includes robust reconnaissance, attack, air assault, utility, and cargo capabilities. It also includes organic aviation maintenance support in the aviation support battalion (located today at the division support command). Combat medical evacuation aircraft are directly organic to the aviation brigade commander to better support our forward forces. Further, it will be much easier

to task-organize across divisions in order to meet the maneuver commander's air requirements.

AH-64 Apache battalions in the new aviation structure are all 24-ship organizations. Black Hawks are increased from 16 to 30 aircraft to provide every division the capability to conduct, at a minimum, a battalion-sized air assault in one lift or sortie as well as increase overall aerial logistics capacity. Aerial cargo support was also moved closer to the warfight by shifting CH-47 Chinooks from corps to the divisional aviation brigade. Additionally, a new fixed-wing Operational and Organizational (O&O) document is in the staffing process that proposes increasing tactical (TOE – Table of Organization and Equipment) aircraft, reducing administrative support (TDA -Table of Distribution and Allowances) aircraft and significantly increasing intra-theater lift potential.

The Aviation UA will contain the Class IVa Unmanned Aerial Vehicle Systems (UAVS) that will enhance manned-unmanned teaming and add more reconnaissance and surveillance capabilities to the Maneuver UA. At least $300 million will be added to our UAVS programs to accelerate this critical capability.

We learned from Special Operations Aviation (SOA) about their utilization of robust liaison teams habitually attached to the Special Operations Ground Forces they work for. In turn, we developed a Brigade Aviation Element (BAE) organic to every ground maneuver unit equipped with long-range joint communications packages to better synchronize and deconflict airspace for responsive planning and execution of combat operations. Additionally, starting

this year the Army will field an interim standardized logistics automation system migrated from SOA to fill an automation void and improve aviation maintenance.

Logistics will be our “Achilles heel” in the future if we do not transform it correctly now. The Army requires future force systems that have predictive, embedded diagnostics and prognostics – similar to those in new cars that tell you when an oil change or maintenance is necessary. Common Transitional System – Aviation (CTS-A) with Aircraft Maintenance Aid Concept (AMAC) interface are Aviation logistics automation systems that will serve as critical sustainability enablers for the future. Aviation maintenance must also transform to support standardized and modular concepts. Our logistics transformation initiatives include tooling reserve component Aviation Classification Repair Activity Depots (AVCRAD) for full integration into the National Maintenance Program mission. The non-linear battlefield will require transitioning to two-level condition-based maintenance. Meaning defective parts are replaced on the system when forward deployed and defective parts are repaired off the system in rear areas or in the U.S. Condition-based maintenance also means repairing equipment only when it breaks or is predicted to break. This concept reduces spare parts requirements, maintenance equipment, forward stationed maintainers and ultimately, the logistics footprint. We must also pursue spares commonality to further reduce logistics and supply distribution overhead. Procurement of sets, kits, and outfits (SKO), special tools, test equipment, and ground support equipment (GSE) will further enable our transition to two-level condition-based maintenance. However, modularity also implies that maintainers must also be

proficient warriors. Every member of the Army Team is a Soldier first and must be proficient in combat skills regardless of unit type. The nature of warfare in the future demands this.

As I mentioned earlier, there is no substitute for demanding and realistic training. Leader development and individual/crew training is the foundation for everything we do. Our training strategy during this period of change is to fully implement Flight School XXI to produce more competent and trained flight crews. We will procure and field six additional Aviation Combined Arms Trainers (AVCATT) suites to conduct collective combined arms training and we will leverage our simulations capability by upgrading or fielding additional AH-64 training devices. To complement our revised training strategies, we will apply over $1.3B to our munitions accounts to resource our unguided training munitions ($1.1B Hydra 2.75" Rockets) and to bridge the gap between the Hellfire missile family ($180M) and the forthcoming Joint Common Missile (JCM).

Recent lessons learned have informed us concerning our doctrine, tactics, techniques, and procedures. Our Aerial Gunnery (Field Manual 1-140) techniques and procedures are being updated to include the "running and diving fire" engagement technique. The United States Army Aviation Center and School is now qualifying all AH-64 pilots on Night Vision Goggles and there is increased training emphasis on Aircraft Survivability Equipment. As a result of preliminary findings from our Aircraft Shootdown Assessment Team (ASDAT), we have initiated maneuvering flight training. A comprehensive review of UAV doctrine is also underway at the United States Army Aviation Center and School.

Tactics, techniques, and procedures for aviation in Military Operations in Urban Terrain (MOUT) have been revised and continue to be refined. Lastly, we must revise our current Army Aviation employment doctrine as we transition to Multi-Functional Brigade (UA) and Aviation Expeditionary Regiment (ARNG) structures under the modularity concept.

ARMY AVIATION MODERNIZATION

On February 23rd of this year, the Army leadership announced initial results of the Aviation Task Force. A significant recommendation was to reallocate RAH-66 Comanche funds to improve the overall capabilities and health of the aviation force. Terminating Comanche was neither an easy decision nor one made without considerable Task Force and leadership analysis. It was the right decision from both an operational and investment perspective that was made in the context of the changing operational environment, numerous studies in the last 25 years, and what we have learned from recent and ongoing operations.

Comanche is unquestionably one of the most sophisticated aviation platforms in the world today. The Comanche team of engineers, software developers, testers, and fabricators epitomize American ingenuity and represent the world's finest. We anticipate multiple opportunities to horizontally integrate leading Comanche technologies into current and planned programs. For example, we envision harvesting the Radar Electronics Unit, Integrated Communications, Navigation and Identification Avionics (ICNIA), Radar Warning

Receiver, and Fly-by-Wire technologies. The Comanche I2TV system is also under consideration.

The central issue to this difficult decision was that Comanche program growth accounted for 40% of the current aviation budget and up to 47% in the Extended Planning Period (EPP). By reallocating approximately $14.6 billion (FY04-11) that would have bought the initial 121 Block I Comanche's, the Army is able to restructure and enhance our $100B investment in the total aviation force to meet current and future requirements.

There will be contract termination costs associated with this decision. Military and industry representatives are working diligently to determine the exact figure. Preliminary estimates are between $480M - $680M; however, the process will take some additional time since we must work with 400+ sub-contractors that have contracts valued in excess of $100K. The Army will disseminate the termination costs when determined and finalized.

Termination of Comanche reflects the Army's recognition of new and changing global security challenges and national security requirements. The result of this reallocation will be a new buy of almost 900 aircraft over the Program Objective Memorandum (POM) to build modular tailorable forces and provide our Reserve Components with more modern systems. The Army will accelerate modernization to include Aircraft Survivability Equipment (ASE) for all airframes. This includes modernization of 1400 aircraft to increase capabilities, survivability, and maintainability beyond 2020. The Army will buy 368 Armed Reconnaissance helicopters, initially upgrade 284 AH-64D's to the Block III

configuration with an ultimate objective of 501, and procure 303 light utility helicopters. This will enable us to completely divest 880 obsolete UH-1 Hueys and OH-58A/C Kiowas and to return UH-60 Black Hawk aircraft from our support and testing communities back to operational units. These FAA certified, commercial off the shelf (COTS), light utility aircraft will provide administrative support at our training bases and will also be assigned to Army National Guard units to conduct state missions, assist in counter-narcotics operations, and to respond to homeland security requirements.

The identified intra-theater lift shortfalls will be addressed through the procurement of approximately 25 Cargo Fixed Wing aircraft, additional procurement of 20 CH-47 aircraft, and recapitalization acceleration for 19 CH-47D aircraft. The plan also provides for new procurement of at least 80 UH-60 L/M Black Hawk aircraft to increase lift capabilities for our Aviation and Maneuver UAs.

The net result of reallocating aviation resources includes procurement, recapitalization, and modernization of 70 percent of the rotary wing fleet plus enhanced Aircraft Survivability Equipment (ASE). In conjunction with our sister services we will begin development of joint vertical lift platforms that provide commonality and revolutionary capabilities in the future. In the meantime, Army Aviation will take a huge step towards the future with balanced and integrated capabilities, modular and tailorable formations, and cohesive and highly lethal units that are deployable, versatile and able to operate in the joint warfight.

As the Army modernizes the fleet, priority of fielding new, recapitalized or remanufactured aircraft is based upon operational unit rotations and support to the Global War on Terrorism (GWOT). Following current operations and the GWOT, units with shortfalls are the next priority. The Army's policy is to provide deploying units in both the active and reserve components with the newest and best available equipment. Overall, this reinvestment should provide no net loss of business and revenue in the rotorcraft industry.

AVIATION SURVIVABILITY EQUIPMENT (ASE)

Aircraft Survivability Equipment and aircrew protection is Secretary Brownlee's number one aviation priority. The Army equips the AH-64, UH-60, CH-47, OH-58D, and fixed-wing Special Electronic Mission Aircraft (SEMA) with A-kits to accept ASE consisting of detectors, Infrared Red (IR) and Radio Frequency (RF) jamming devices, and chaff and flare munitions to counter RF and IR threat systems. All Active Army, National Guard, and Army Reserve deployed aircraft, are equipped with ASE. Additionally, protection against direct fire from small arms weapons is provided by armor panels, most frequently located in crew compartments and sensitive areas of the aircraft (such as the engine). On January 9, 2004, an Army G3 Policy Board approved the acquisition of Aircraft Ballistic Protection Sets (APBS) for deployed Cargo and Utility Helicopters that will ensure an enhanced degree of protection throughout the cargo/passenger compartment.

Currently, the Army is modifying the OIF utility fixed-wing fleet to accept ASE while upgrading in theater and deploying CH-47's with the ALE-47 Flare/Chaff Dispenser to counter anticipated anti-aircraft threat missile systems. On 14 January 2004, the Chief of Staff approved an accelerated ASE acquisition plan that will initially focus on upgrading to the next generation Common Missile Warning System (CMWS) and Improved Countermeasure Munitions Dispenser (ICMD) for OIF / OEF deployed and deploying helicopters and fixed wing aircraft. This effort will commence by upgrading CH-47's, followed by selected fixed wing aircraft, UH-60's, and AH-64's. Over the POM period, the Army's modernized aviation fleet will be modified to accept an advanced countermeasure system consisting of CMWS / ICMD and a Multi-Band LASER Jammer. With respect to training, the Army formed an assessment team to review in-theater missile / helicopter incidents. The goal of this team is to develop lessons learned for incorporation into Standard Aviation Programs of Instructions and Tactics, Techniques, and Procedures (TTP's) adhered to by Army Aviation Units.

AVIATION SCIENCE AND TECHNOLOGY (S&T)

The Army Aviation Science and Technology (S&T) program fuels revolutionary aviation development, expands scientific knowledge in the area of manned and unmanned helicopters, and matures and demonstrates new technologies in support of the Future Force and Joint Vision 2020. Based on the Army Transformation Plan, this effort has been focused on investigating and developing technologies applicable to unmanned systems and to support

selected opportunities for manned systems. The Army has a unique responsibility within DoD as the service lead for rotorcraft S&T investment. Under DoD Project Reliance, the Army has the responsibility to address the rotorcraft S&T requirements of all services and the Special Operations Command (SOCOM) in the areas that are not service or command unique.

The aviation S&T program invests in three areas: basic research, applied research, and advanced technology development. The Army invests in world-class expertise in academia, industry and other government agencies, as well as in state-of-the-art equipment in the area of basic research.

A highlight of basic research is investment in the Rotorcraft Centers of Excellence at Pennsylvania State University, Georgia Institute of Technology and the University of Maryland. Basic research is conducted by the Aviation and Missile Research, Development and Engineering Command (AMRDEC) Aeroflightdynamics Directorate (AFDD) located at the Ames Research Center, Moffett Field, CA and by the Army Research Laboratory (ARL) Vehicle Technology Directorate at the Glenn Research Center, Cleveland, OH and the Langley Research Center, Langley Air Force Base, VA.

The Army Aviation applied research program provides the enabling technology and baseline for aviation development. This research includes enabling technologies for manned and unmanned rotorcraft in propulsion, rotors, drive train, and structures. A highlight of the program is the expansion of knowledge in air system autonomy and manned-unmanned teaming. The applied research program also invests in the National Rotorcraft Technology

Center. The Center is a partnership of government, industry, and academia for developing air vehicle designs and other rotorcraft technologies. The program is executed at AFDD at the Ames Research Center, the Langley Research Center, and the ARL Vehicle Technology Directorate at the Glenn Research Center.

A key element of the aviation applied research program is the longstanding partnership the Army has established with the National Aeronautics and Space Administration (NASA). This partnership, first established in 1965, has resulted in an exemplary, highly integrated national technology program that is fully coordinated with industry and devoid of duplication of facilities and programs. All fielded United States military rotorcraft, and derivations that have established our commercial base, can be traced back to this Army/NASA partnership. DoD/Army rotorcraft and the Vertical Takeoff and Landing (VTOL) UAVS technology development strategy depends on the continuing partnership with related NASA technology programs.

The Vertical Takeoff and Landing (VTOL) Unmanned Aerial Vehicle Systems (UAVS) potentially bring unprecedented agility, maneuverability, and lethality to the Future Force, while reducing signatures and logistics burdens. The Transformational nature of the UAVS, both in capabilities and new paradigms, has energized the aviation field (in industry and academia) to truly "think outside the box." The benefit to the Department of Defense (DoD) and the Army will be revolutionary warfighting capabilities, as well as enhancements to the current force.

The aviation advanced technology development program is focused on UAVS, with an emphasis on demonstrations to provide the warfighter with the menu of technology for development and integration into the force. The demonstration programs will mature technology into realistic and robust prototypes. Technologies that enable autonomous flight, higher aerodynamic airframe loads, and increased maneuverability possible with UAVS will be demonstrated. A highlight of this effort is the Airborne Manned-Unmanned System Technology (AMUST) and the Hunter-Standoff Killer Team (HSKT) Advanced Concept Technology Demonstration (ACTD). These programs constitute the major effort to demonstrate manned-unmanned teaming. The program also invests in propulsion, drive train and structure technologies that enable UAVS application and have technology transfer opportunities to manned airframes. The advanced technology development program is managed by the AMRDEC Aviation Applied technology Directorate (AATD) at Fort Eustis, VA.

Another notable highlight of the advanced technology development program is the Army-Defense Advanced Research Projects Agency (DARPA) partnering on UAVS platforms for lethality, surveillance and communications relay. The Army is pursuing increased lethality for the Future Force through the Unmanned Combat Armed Rotorcraft (UCAR) program (an armed VTOL UAVS) designed to team with manned or unmanned systems. Increased surveillance capability is being pursued through the A-160 Hummingbird Program, a medium altitude, long endurance VTOL sensor and communications platform, and the

Organic Air Vehicle (OAV), a ducted fan VTOL UAVS that can be carried by the Soldier and/or launched from a vehicle.

The investment by the Army in aviation S&T is guided by the requirements of the Future Force. Our investment in advanced technology development will grow in the coming years to meet the challenges of those requirements. The Army is confident that the aviation S&T investment represents a prudent program that meets the DoD and Army Transformation goals.

CONCLUSION

In closing, I have been very impressed and pleased with the performance of Army Aviation in our recent and ongoing operations. But we can get better…. We have to get better. Strengthening Army Aviation and investing for a successful future reaffirms to our Soldiers, our sister services, and the nation, that only the best equipment and capabilities put into the hands of the finest Soldiers in the world will be brought to bear in protecting our way of life, defeating terrorism, and the fight for freedom over tyranny.

Thank you for allowing me to share our work and participate in this session. We look forward to answering your questions.