RECORD VERSION

STATEMENT BY

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DIRECTOR, FUTURES CENTER

U.S. ARMY TRAINING AND DOCTRINE COMMAND

BEFORE THE

COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON AIRLAND

UNITED STATES SENATE

SECOND SESSION, 108TH CONGRESS

ON ARMY TRANSFORMATION

MARCH 11, 2004

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

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Senator Sessions, Senator Lieberman and distinguished members of the subcommittee, I am pleased to be here today to discuss how we are accelerating change in the Army and the impact of our actions on Current and Future Forces. As Director, Futures Center, U.S. Army Training and Doctrine Command (TRADOC), I welcome the opportunity to testify before you. I appreciate your interest in our endeavors. My intent is to assure you that our efforts support our Soldiers today and will provide the Nation with a more capable force for an uncertain future.

Much has changed since this subcommittee met a year ago tomorrow to hear testimony from the Army's leadership. One year ago, we were on the brink of war with Iraq. The hearing centered on the challenges the Army faced for modernization, recapitalization and the lessons learned from the war in Afghanistan. Since the defeat of the Iraqi Army, the U.S. Army achieved Milestone B for the Future Combat Systems (FCS) program, fielded and deployed a Stryker Brigade Combat Team (SBCT), maintained a strong presence to fight the insurgency in Iraq, deployed almost every available combat formation, institutionalized transformation by establishing the Futures Center, and positioned the Army for continued transformation into a modular force.

The role of the organization I lead is to be the Army's architect of the future. We take our business very seriously. Our Soldiers, both today and in the future, depend on us to develop a more agile, mobile, lethal, and survivable force. We are leading the effort to build a campaign

capable, Joint and expeditionary Army. The Army is accelerating changes to the Current Force to adapt to the existing and emerging operational environments. Simply stated, we must transform an Army that is at war.

TRADOC is the primary point of entry into the Army's Future Force development. Among TRADOC's core competencies are the ability to prepare the Army for Joint operations and serve as the architect of the future. We develop or capture innovative ideas and carry them through experimentation and fielding to expand the Army's capabilities. Chief among our partners is the U.S. Joint Forces Command (JFCOM), with whom we have built a rapport and trust that underpins a great team. The Army's Future Force will evolve to meet Joint rather than Service defined capabilities.

As the architect of the future, TRADOC's Futures Center is the Army's reconnaissance force. We are continually assessing the future and this assessment is driven by real-time guidance and direction from policy documents like the National Security Strategy and the Transformation Planning Guidance. The Futures Center is the nexus of Army innovation with a great degree of influence on how the Army thinks, acts, trains and fights. While relatively new, the Futures Center is the lead action agent to develop the Future Force. We have subsumed the mission and roles of the Objective Force Task Force and we are building on the foundation of their success. We are also enabling Soldiers in the current fight by determining capabilities gaps and integrating discreet Future Force capabilities that add significantly to the Current Force. Too often, we picture these spirals as materiel solutions, but our efforts span the breadth of doctrine, organizations, training, materiel, leadership and education, personnel and facilities. This is a very challenging mission, but we are uniquely postured to do the job.

At the same time, we fully recognize that we cannot do this alone -- “Futures” is a team sport. Partnering with the Department of Defense, Joint and Interagency communities, other Services, industry, academia, our Allies and the Army family is critical to our success.

To fully realize the contribution of Army capabilities to the Joint fight, we now work through the Joint Capabilities Integration and Development System (JCIDS) to articulate Army capability requirements. JCIDS is the top-down process involving functionally-focused teams centered on developing required capabilities and effects rather than systems. The process involves regional and functional combatant commanders early on in the development process to ensure their requirements for combat and combat support forces are being realized. It represents a sharp break from the bottom-up, systems-focused approach used during much of the Cold War.

TRADOC executes the JCIDS process by analyzing Army warfighting concepts derived from strategic guidance, the Joint Operations Concept and subordinate Joint operating, functional and integrating concepts. These concepts describe how the Future Force will operate, the conditions and environment in which it must operate, its required capabilities in terms of missions and effects, and its defining physical and operational characteristics. We analyze these required capabilities to isolate the tasks, conditions and standards that the force must perform. We assess these tasks to determine gaps in capability that pose sufficient operational risk to constitute a capability need requiring a solution.

We then perform an operationally based assessment of potential doctrine, organization, training, leadership and education, personnel, and facilities (non-materiel) or materiel approaches to solving or mitigating one or more of the capability needs we’ve identified. Non-materiel changes,

product improvements to existing materiel or facilities, Joint or other Service's capabilities or adoption of Interagency or international solutions that solve or mitigate the capability need are recommended to Army senior leadership. Only when these solutions do not solve the capability need, will TRADOC recommend a new materiel start and continue the JCIDS process into the Defense Acquisition System.

The Army as a Service and a Joint partner is an integral participant on committees and boards that manage the JCIDS process. More importantly, we see these groups as critical entry points in the process where Army programs are validated as we attempt to spiral improvements into the Current and Future Force. As we interact with the Joint community and our sister Services, our focus is to bring issues, potential programs and concepts to the Joint Requirements Oversight Council (JROC) as soon as possible to determine how they provide new warfighting capability. The scope of analysis of shortfalls does not simply look at the materiel side of the equation -- the hardware of weapon systems. This is "old think," a past practice that no longer works within JCIDS.

We look at all Services' doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) alternatives for solutions. Further, the JCIDS process provides the analytical foundation that allows members to understand the realities for advancing a new program or deciding to change some other element of the DOTMLPF equation to address the shortfall. We are institutionalizing the new JCIDS process into Army thinking – it is no longer a bureaucratic hurdle, it is the way that partners engage in bringing value to the whole team.

To accelerate change and rapidly integrate Future Force capabilities into the Current Force, TRADOC leads the Army's concept development and experimentation effort; focused on four areas:

- Developing coherently Joint Army operational concepts and capabilities
- Testing prototype capabilities
- Providing actionable recommendations to inform DOTMLPF decisions
- Integrating a broad community of practice

Transformation has no endstate -- it is a continual process. We will have intermediate objectives along the transformation path, but we will not reach a point where we declare that we have in fact fielded the Future Force. The goal is to continually strive to spiral mature capabilities into the Current Force so that over time our Army more closely resembles the vision of the Future Force. We aggressively use live, virtual and constructive experimentation. Out of these experiments, we derive actionable recommendations to reduce Future Force development risk. Aggressive prototyping and testing satisfies current and future force operational needs by deploying compelling technology today.

The Army is currently exploring five prototype areas:

- Stryker Brigade Combat Team (SBCT) – a focus on further SBCT and Unit of Action (UA) development.
- Air Assault Expeditionary Force – a focus on networked lethality at the small unit level.
- Unit of Employment – a focus on incrementally fielded Unit of Employment (echelon above brigade) capabilities and integration with emerging USJFCOM prototypes like the Standing Joint Force Headquarters (SJFHQ).

- Modular Force Redesign – a focus on unit organizations to increase agility and effectiveness.
- Squad Redesign – a focus on squad organizations to increase lethality and maneuverability

Institutionally, we have adapted our structures to build a broad community of practice with a series of fora that harness the widest range of intellectual capital. In 2003, for the first time the Army and JFCOM entered into a partnership and co-sponsored UNIFIED QUEST (UQ03), the Army's premiere transformational wargame. This Joint wargame explored not only Army concepts, but Joint and inter-Service concepts in a Future Force whose capabilities must be "born Joint". This leap in transforming our military through application of spiral concept development also creates an environment where both JFCOM and TRADOC can examine several unique embedded experiments that are specific to each organization. Following in the footsteps of UQ03, this year's wargame, UQ04, will set a new precedent-breaking path by extending the exercise play from that of UQ 03. Game organizations will examine scenarios that involve major combat operations, stability operations, transition to post-conflict and network-centric command structure in the year 2015.

We are also engaged with our sister Services in their wargames like the Navy's UNIFIED COURSE 04, the Air Force's UNIFIED ENGAGEMENT VII, and the Marine Corps' JOINT URBAN WARRIOR. We complement this work with insights gained from our Army battle labs, which span the range of capabilities from air and missile defense to special operations. Forces that participate in developmental and readiness exercises augment our judgments by providing field perspectives as they go through after action reviews once the exercises are complete.

Going beyond wargaming, the Army and other Services are beginning to enhance Joint interdependence through enhanced Joint training exercises. JFCOM's Joint National Training Capability (JNTC) exercise trains America's Joint Force. The JNTC links Service training facilities and ranges into a real-time, joint training environment around the world effectively bridging communications to apply the full range of multi-level Joint capabilities into Joint exercises. These exercises bring to bear the mutual supporting relationships of the Services and allow exploration of the seams and gaps existing today in operational settings.

This wealth of knowledge gained through all of the examples I've discussed has challenged us to make adjustments to ensure we capitalize on what we learn. We have quarterly executive level reviews to examine progress to date and make adjustments to the way ahead. We have monthly meetings at the Joint level on broad concept development and experimentation issues which guide Joint work at all levels. There is a constant exchange of information in face-to-face meetings at all levels that is robustly augmented by a high level of on-line collaboration. This continuous process of collaboration and interaction forms the architecture for transformation efforts.

We work hard at analyzing the gaps between future capabilities called for by the Joint Operations Concept and efforts underway in our prototyping and concept development programs today. We incorporate an intelligence community evaluation of potential future enemies and future challenges. We constantly review operational lessons learned like the Army's and JFCOM's Operation Iraqi Freedom "Quick Looks," individual unit lessons learned, and combatant commander assessments. We support this work by a robust analytical process that assimilates innovative practices—including best commercial practices, collaborative environments, modeling, simulation and electronic business solutions.

We couple the analysis with Army-wide judgments to create a holistic snapshot of where we need change.

Our snapshot of capabilities gaps for the Current Force is exactly what it implies – today's best judgment of shortfalls to guide our prototyping, experimentation and concept development. The snapshot will change as our enemy adapts his operational methods to engage us in asymmetric ways and we gain experience in how to continue to achieve our mission in spite of those new tactics. We are looking at numerous areas including providing:

- Improved Soldier protection in counterinsurgency environments
- Prototype network-enabled Battle command
- Responsive, networked, precision fires
- Protecting the force in non-contiguous battlespace operations
- Improved non-lethal capabilities
- Improved Joint Urban Operations
- Expanded human intelligence (HUMINT) capabilities
- Increased ability and speed of analysis and information dissemination
- Increased ability to sustain a high operational tempo
- Improved Special Operation Forces and conventional forces integration
- Improve Joint intra- and inter-theater lift

These examples of capabilities gaps inform both our concept development and prototyping efforts, which are simultaneous, parallel, and supporting. The plans we develop must be completely nested in what JFCOM is doing. This comprehensive task capitalizes on the broad Army community of practice from our battle labs, operational units, research

labs, and materiel developers. The end product will resemble what those who coined the term “Joint Interdependence” envisioned -- an understanding of the differing strengths and limitations of each Service’s capabilities, clear agreement about how those capabilities will be committed in a given operational setting, and absolute trust that, once committed, they will be employed as agreed. The outcome is a Joint Force significantly stronger than the sum of its individual parts, one that will always be successful in fighting the Nation’s wars when called upon.

At the heart of the Army’s vision of the Future Force are new operational concepts. These concepts are inherently Joint, but will nonetheless have tremendous impact on every dimension of our Army. One of the most obvious dimensions of change will be in how we organize to fight. At the same time, our current operations illustrate many opportunities for force design improvements. Reorganizing our force now provides Combatant Commanders with better alternatives in the near term. Further, we believe that accelerating several changes envisioned for the Future Force into the Current Force, centered on modularized brigade combat teams, is the way ahead to maintain the high benchmark of success demanded of us, both in the near term and in the future.

What led us to conclude that brigade, division and corps structures, so successful for so many combat operations, must change? We’ve learned in the harsh combat conditions of Afghanistan and Iraq that change is both essential and possible for us to improve as a robust member of the U.S, Joint warfighting team. There are now opportunities for a new level of Joint interdependence that can weave major land, sea and air operations into a coherent joint fabric and push “jointness” down to the lowest possible tactical levels. To engage enemies that employ varying operational techniques, the regional Combatant Commanders require ground forces that are scalable, available early in a campaign and

complementary to other Joint capabilities. The elements of time, geography, and the disposition of our adversaries require operations that are nonlinear, noncontiguous and less hierarchical. We must employ improvements in weapons and techniques across all warfighting dimensions to make engagements more precise and lethal. These challenges, however, require more than just materiel solutions – we need new formations.

The Army is deploying evolutionary organizations on the battlefields I've just described. We have a Stryker Combat Brigade Team deployed in Iraq providing daily insights into adjustments we can make in our Future Force redesign efforts. The 3rd Infantry Division (ID) will roll out the first provisional Heavy Unit of Action this month as a standing combined arms brigade. The division will take this redesign to the National Training Center this spring to mature the organizational design and refine its tactics, techniques and procedures. The 3rd ID will create three more Heavy Units of Actions by July 2004. The Army will begin building the first two Infantry Units of Action in the fall beginning with the 10th Mountain Division and the 101st Airborne Division. All active component divisions will tentatively complete conversion by FY07. Army National Guard (ARNG) brigades will also convert to these common modular designs; the ARNG and Army Staff are working on the sequence to do this as quickly as possible. This will enable the Army to rapidly tailor forces to meet the combatant commanders' requirements, and employ flexible, smaller formations distributed across an extended battlespace.

Both our current experience and emerging operational imperatives confirm our judgment that the FCS-equipped Unit of Action is the organizational template capable of meeting the regional combatant commander's requirements of the future. By accelerating the transformation of the Current Force toward a force with many of the

characteristics of the FCS-equipped Future Force, we will accelerate our transformation in areas such as doctrine, training, and leader development. Such a force will be agile, lethal, networked, precise, rapidly deployable, modular and born Joint. The modular Army we are building today is the bridge to the FCS-equipped Unit of Action.

Future Combat Systems are comprised of a family of advanced, networked air- and ground-based maneuver, maneuver support, and sustainment systems that will include manned and unmanned platforms. Future Combat Systems are networked via a command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) architecture, including networked communications, network operations, sensors, battle command systems, training and both manned and unmanned reconnaissance and surveillance capabilities that will enable improved situational understanding and operations at a level of synchronization heretofore unachievable.

Future Combat Systems will operate as a system of systems that will network existing systems, systems already under development, and new systems to be developed to meet the needs of the FCS-equipped Unit of Action (UA). The network will enable improved intelligence, surveillance, and reconnaissance (ISR), enhanced analytical tools, Joint exchange of blue and red force tracking down to the tactical level, battle command, real time sensor-shooter linkages, and increased synergy between echelons and within small units. It will also enable the UA to connect to Unit of Employment, Joint capabilities, and national assets making these capabilities available to the small units of the UA. Future Combat Systems will enable the networked Maneuver Unit of Action to develop the situation in and out of contact, set conditions, maneuver to positions of advantage, and to close with and destroy the enemy through

standoff attack and combat assault as articulated in the Unit of Action Operational and Organizational Plan.

The FCS-equipped Maneuver Unit of Action is not just a unique Brigade Combat Team, built around a family of systems, but a new concept for fighting those systems. This formation will be part of a Joint team that is decisive across the spectrum of conflict, in all types of operations, against the complexity of threat capabilities, in a variety of terrain and weather environments. The UA balances the capabilities for strategic responsiveness and battlespace dominance, resulting in an expeditionary force with campaign qualities. It can perform tactical and operational maneuver by land, air, and sea. The UA can be tailored with additional capabilities for specific missions during a campaign. It employs its revolutionary C4ISR architecture to expand or contract its span of control and integrate Unit of Employment (the next higher Army echelon) or Joint Task Force supporting capabilities to accomplish missions. Its significantly improved ability to collect and process information using organic and external Joint and Army supporting sensors and sources ensure that commanders will possess the timely, accurate intelligence necessary to achieve decision superiority. The UA improves the ability of Soldiers and leaders to achieve lethality and survivability overmatch. Like our Current Forces, the foundational centerpiece of the formation remains Soldiers and leaders, enabled by technology, within mounted and dismounted small unit fighting teams.

As the Army's "Architect of the Future," the Futures Center will continue to provide a warfighter perspective to the integration of DOTMLPF actions to enable the Army to achieve FCS-equipped Future Force capabilities by the end of this decade. We collaborate with the FCS Program Manager (PM) and the Lead Systems Integrator (LSI) to ensure simultaneous and parallel Future Force, Unit of Action, and FCS

developments are properly synchronized and integrated to meet the user's requirements.

The FCS program requires a continuous and consistent refinement of requirements. The JROC approved the FCS Operational Requirements Document in Apr 2003. At that time, the JROC approved seven Key Performance Parameters (KPPs), which were then included in the Acquisition Program Baseline: Joint Interoperability (which we will convert to the new Net Ready KPP standards), Networked Battle Command, Networked Lethality, Transportability, Sustainability / Reliability, Training, and Survivability. We are currently completing our analysis of these KPPs to add and refine metrics; the refined KPPs will go back to the JROC by September 2004 to support a Milestone B review with the Office of the Secretary of Defense (OSD) in November this year.

Since entry into System Development & Demonstration (SDD) phase, TRADOC has worked collaboratively in a "One Team" structure with PM FCS and the LSI to develop and refine the program threshold and objective system of systems specifications, which represent the requirements baseline for the program. We are currently working with our partners to complete design trade studies, which will support selected design decisions this spring.

This effort demands an unprecedented level of sustained TRADOC involvement by its best experts at the Futures Center and the Army's institutional schoolhouses. TRADOC is committed to providing User support to the program that is characterized by innovation, forwarding thinking, collaboration, cooperation, and team play. This support is distributed across the command, but integrated using the Unit of Action Maneuver Battle Lab (UAMBL), the TRADOC System Manager (TSM) for FCS, and the Futures Center. We are also assigning TRADOC user

personnel to collocate with PM FCS and some LSI and sub-contractor facilities involved in FCS developments to ensure rapid User feedback on design issues as they arise during SDD. TRADOC is also committed to supporting the One Team in the day-to-day management of SDD. TRADOC has designated subject matter experts from throughout the command to serve on each of fourteen Integrated Product Teams (IPT). TRADOC also provides colonels and general officers to serve on program change control boards, giving us real time visibility and participation in resolving issues affecting cost, schedule, and performance. The Futures Center and UAMBL are partners with the PM and LSI in major program reviews; we also support the OSD IPTs which prepare the Army for OSD-level reviews. We fully support our program partners in focusing FCS development at the system of systems level, with front-end prioritization of architectures, engineering, and integration. We believe this revolutionary acquisition process is key to achieving future force capabilities.

TRADOC has networked its battle labs to conduct extensive experimentation during the SDD phase to provide real time user feedback to the FCS program as the family of systems are designed and developed. The Futures Center is strengthening its collaboration with Joint Forces Command to ensure joint integration. It is also strengthening TRADOC's links to the Marine Corps Combat Developments Center to ensure that Army and Marine Corps FCS common requirements are synchronized when the FCS program transitions to become a Joint Program Office.

While experimentation, analysis, studies, and technology inform us about what the Future Force will use to fight the next war effectively, it is the individual Soldier who is the centerpiece of our focus. War is a test of wills; the human dimension is its most crucial dimension. The Soldier is indispensable to the Joint team – the most effective, flexible, and adaptive asset we have. Our philosophy of equipping the Soldier instead of

manning the equipment is enduring. When we enhance the Soldier's lethality, protection and situational awareness, we enable individual initiative and competence at the point in which battles, wars and the peace are won.

In summary, we're taking on the biggest challenge an Army can face: transforming while at war. We must rapidly adapt to a future we did not perfectly anticipate and we must do this with forces deployed globally. Our guideposts are clear – experiment widely with our Joint and Service counterparts, never be content with only materiel solutions, aggressively use spiral development to get elements of the Future Force into the hands of the Soldier on today's battlefields and ensure our innovation results in "born Joint" capabilities that contribute to successful mission accomplishment at any point on the globe across the spectrum of conflict. The window of opportunity to do this is finite; we must not tire in our efforts. We will need the full support of Congress to underpin our success. The Army's transformation supports our Soldiers today and will provide our Nation with a more capable Future Force for an uncertain future.

Thank you.