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SUBCOMMITTEE ON TERRORISM, UNCONVENTIONAL THREATS
AND CAPABILITIES
UNITED STATES CONGRESS

STATEMENT OF
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SUBCOMMITTEE ON TERRORISM, UNCONVENTIONAL THREATS AND CAPABILITIES
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COMMITTEE ON ARMED SERVICES

Mr. Chairman, distinguished Members of the Committee, thank you for the opportunity to testify on C4 systems, and the role of U.S. Joint Forces Command in developing a "coherently integrated Joint force," as directed by the President in the Unified Command Plan.

The term C4, or "Command, Control, Computers and Communications," is commonly divided into two separate terms C2 and C2: or, C2 for the human function of Command and Control; and, C2 for Communications and Computers. USJFCOM's primary focus in this area is the Joint, human and equipment functions of C2, Command and Control, at the operational level.

In our Joint Command and Control role at the operation level, I want to assure the Committee that a high priority focus for the U.S. Joint Forces Command is strengthening the capability for Combatant Commanders and Joint Task Force Commanders to execute coherently Joint battle management command and control of our forces, from the strategic to tactical levels, through increasingly mature roadmaps, oversight and vision for the networked force and the Global Information Grid (GIG). In partnership with the Combatant Commanders, Joint Staff, Office of the Secretary of Defense, Services, Departments and Agencies, mentioning specifically the close partnership with the Offices of Secretary of Defense for Networks and Information Integration (ASD(NII)) and for Acquisition, Technology and Logistics (ASD(AT&L)), and the Joint J6 and J8, we continuously advance improvements in the speed and precision of planning, the ability to collaborate, and Joint military command and control capabilities. The fully networked Joint force is necessary to achieve rapid, coherent and decisive operations.

As we move to a more networked force, USJFCOM serves as a bridge between current capabilities and future concepts. First I will discuss the current environment.

The Department is in the midst of extraordinary turbulence, change and transformation.

Most important, we are a Nation at war. We face a global war against terrorism fighting in Iraq and Afghanistan. We are engaged in the most significant ground war our Nation has fought in 30 years. Each day soldiers, Sailors, airmen and Marines, the wonderful men and women of our all-volunteer force, place their lives at risk on our behalf in the name of democracy and freedom.

In many cases, the equipment they use was designed for a different battle, against a different enemy, on a different continent. Yet, with remarkable individual resilience and supported by the power of America's industrial might, the Services supported by Department of Defense, the Joint Staff and USJFCOM, have done a superb job of adjusting unit missions and training, and rapidly fielding new and modified equipment, to help our forces be successful each day as they transition from warriors to nation builders within the same day, on the same block, in cities throughout Iraq and Afghanistan.

Concurrent with being a Nation at war, transformational changes have occurred along two additional lines I'd like to address: how we command and control our forces and conduct our operations; and, the impact of "information age" technology on those operations.

Perhaps most significantly, we have transitioned from Service headquarters, such as an Army corps controlling Army forces, to Joint

Task Force Headquarters commanding and controlling Joint forces. Changing from the traditional view of "Services organize, train and equip ... and operate" to one of "Joint command and control" is a significant transformation. Implementing this transformation through initiatives such as the Standing Joint Force Headquarters, Joint Mission Rehearsal Exercises, and Deployable Joint Command and Control, provides a standardized way to jointly organize, train, equip and operate our Joint Task Force headquarters, as well as a new way to train and equip our forces, enabled by networked centric capabilities. This new paradigm is driven by today's requirement to fight seamlessly in a joint environment, and by the introduction of information age technology.

New technologies, specifically in information age capabilities, now offer us opportunities previously unimagined. First, the bandwidth available in Operation IRAQI FREEDOM offered a previously unimagined vision for a future network centric force. The power of small transmitters and sensors lets us see and sense beyond previous limits. Precision locating and targeting maximize our energy and resources, and give new meaning to "concentration of force" while simultaneously saving lives and resources. Unmanned Aerial Vehicles (UAVs) expand available actionable intelligence. The synergistic effect, exploited through the GIG, provides the ability to more fully "integrate" through information age capabilities: to get the right information to the right decision makers at the right time; to conduct concurrent large scale top-to-bottom collaborative decision making; and, to focus precise energy and effort management in real time resulting in real time shared situational awareness. This results in the ability to conduct knowledge-enabled, effects based operations allowing our Joint

forces to decide, act and adjust faster than our adversaries. All of this is enabled by networked, information age capabilities.

The comparison from the Operation DESERT SHIELD/DESERT STORM to Operation IRAQI FREEDOM provides a few insights into the application of technology and the growing power of the networked force:

- Bandwidth improvements - The bandwidth available for use during Operation IRAQI FREEDOM was over 42 times more than that available during Operation DESERT STORM, increasing from 100 Megabytes per second to 4.21 Gigabytes per second.

- Precision munitions advantage - In Operation DESERT STORM, eight percent of air launched munitions were precision weapons. During Operation IRAQI FREEDOM, 66 percent of the air-launched munitions were precision weapons. This improvement vastly reduced the amount of energy and resources required, while minimizing collateral damage.

- Information Technology improvements - In Operation IRAQI FREEDOM, there was over a threefold increase in the availability of moving target indicator (MTI) radar data, largely as a result of more Joint Surveillance Target Attack Radar System (JSTARS) aircraft.

- Information management - In Operation IRAQI FREEDOM, 3200 hours of full motion video was available to decision makers, as opposed to none during Operation DESERT STORM.

These four examples illustrate the increasing capability, power and potential of networking sensors to decision makers to shooters. The availability of the Department-wide architecture for the Global Information Grid (GIG), along with integrating concepts like the Net-

Centric Operations and Warfare Reference Model, the Defense Information Standards Registry, the net-centric data strategy and its NATO equivalent, and net-centric checklists for program reviews are providing an integrating framework for the development of future capabilities through the JCIDS, acquisition and Planning, Programming, Budgeting and Execution (PPBE) processes. Yet, there are complicating factors.

First, we are a military at war. The highest priority is to resource current warfighter requirements. Services must buy what war fighters need now.

Second, in many cases, we know what technology could offer the networked force, but the full technology is not yet mature or available in a field ready version.

Third, just as you and I have perhaps individually decided when to upgrade our home computer, pagers, cell phones, or home phones, at different times, often at costs that were more than expected, so too, our Total Active, Guard and Reserve Forces of the Army, Navy, Marine Corps and Air Force have had to decide, based on available resources, available technology, anticipated technology, current mission requirements and anticipated future requirements, when to divest legacy equipment and with what technology to replace it. Directly addressing this issue, the Department's Joint Battle Management Command and Control (JBMC2) Roadmap charts a clear migration path, incorporating components such as the Global Command and Control System (GCCS) migration to JC2, and integrating net-centric capabilities now being entered in the JCIDS process into programs of record within the GIG architecture.

Fourth, during the cold war we faced a well-defined and well-known threat. A nation-state with known tools of war. We understood their tactics, weapons and capabilities. We could predict and template the enemy's activity. In the global war against terrorism, we now face an undefined, unpredictable non-nation state adversary with ambiguous values, who is willing to inflict mass casualties at will. The environment is global, networked, unpredictable and without boundaries. We don't have the luxury of a strategic pause: we are at war.

Given the luxury of peace, time and resources, the Services and Department could terminate the purchase of legacy C4 systems, take a strategic pause in purchasing, wait for technology to mature, and wait for the resources to purchase the right future capabilities, at the right moment, to maximize the networked synergy of the future, Joint force enabled by state of the art technology. We have neither this luxury nor the time to spare.

Faced with the current threat; the emerging reality of Joint, interagency and coalition operations; the existing inventory of communications systems; available resources; and our assessment of available and emerging technology; I believe that USJFCOM and our partners in the Department of Defense have taken a very clear and responsible path toward achieving networked capabilities, merging service capabilities to joint capabilities, and eliminating duplicative capabilities. For example:

- In October 2001, the Deputy Secretary of Defense directed the Department's transition to net-centric C4 capabilities with a goal to make legacy systems interoperable by 2008.

- The Department established a Net Centric Review process to ensure that future acquisition programs would be net-centric within the context of the GIG.

- The Department developed a Joint Battle Management Command and Control Roadmap to provide a comprehensive, executable plan for improving how we organize, train and equip to achieve Joint battle management command and control capabilities. These efforts provide a pathway to the future consistent with the GIG to guide services, joint data standards, and joint capability assessments.

- The Joint Battle Management Command and Control Board of Directors provides a warfighter venue to focus and establish Joint battle management command and control capability requirements and a forum to provide input to the Joint Capabilities and Integration Development System (JCIDS) process.

- USJFCOM supports the Chairman of the Joint Chiefs of Staff (CJCS) and the Joint Requirements Oversight Council (JROC) in identifying, assessing and prioritizing Joint military capability needs through the Joint Capability Integration and Development System (JCIDS) process. On behalf of the Chairman, USJFCOM reviews all Service and Agency capability documents, evaluating key performance parameters and adherence to recognized standards. In this capacity, last fiscal year, USJFCOM performed 170 reviews of tactical C4 operational capabilities, fully participating in the capability development process.

- Limited Acquisition Authority (LAA): The Acting Under Secretary of Defense for Acquisition, Technology and Logistics has granted the Commander of USJFCOM an innovative, temporary authority to

speed delivery of capability to the Joint Warfighter. Limited Acquisition Authority (LAA) is an effort to accelerate our ability to deliver Joint Command and Control capabilities, and improve Joint force interoperability. This enables the deployed warfighter to receive immediate capability within the year of budget execution.

Let me highlight four good examples of how the above processes are helping us develop Joint end-to-end capabilities from the strategic to the tactical to reduce duplication and emphasize joint integration and interoperability.

- Deployable Joint Command and Control (DJC2): In coordination with the Navy, as the Acquisition Executive Agent, and the Joint Battle Management Command and Control Board of Directors, USJFCOM exercises oversight responsibilities as the user representative and advocate for Combatant Commander desired operational capabilities. This new program will provide our Combatant Commanders a rapidly deployable, standardized, modular, joint command, control, and collaboration capability beginning this year with the first delivery to U.S. Pacific Command. DJC2, coupled with the emerging Joint Command and Control (JC2) program of record (for which The Assistant Secretary of Defense (Networks and Information Integration) [ASD (NII)] is the Milestone Decision Authority), will ensure warfighters are operating on a single architecture enabling an interoperable and jointly integrated capability.

- Joint Blue Force Situational Awareness (JBSFA), Joint Translator Forwarder (JxF) and Rapid Attack Information Dissemination Execution Relay (RAIDER): These near-term initiatives reflect a partnership with the Deputy Undersecretary of Defense, Advanced Systems

and Concepts [USD (AS&C)], and are consistent with the Department's long-term approach for merging blue force tracking systems into an integrated system. They provide the Joint Force Commander the ability to integrate and "see" multiple blue force tracking systems operating within his assigned area, and identify the tracked friendly forces, thus reducing the likelihood of "blue on blue" engagements. This software capability will improve current strategic to tactical Blue Force Situational Awareness by providing an integrating solution for rapid translation/forwarding of numerous disparate, non-standardized tactical data links. This translation and forwarding capability also provides time sensitive targeting, digitized information direct to the cockpit of strike/support aircraft using these same tactical data links.

This JBFSA and JXF capability will be fielded to the U.S. Central Command and its Coalition Air Operations Center in June 2005 with RAIDER to follow in the summer. USJFCOM has fielded two RAIDER systems to U.S. Forces Korea (USFK), which have become an integral part of USFK operations. USJFCOM has partnered with the U.S. Navy acquisition community to produce, field and sustain the RAIDER capability.

- JTF Commander Executive C2 Package. This robust improvement provides command and control connectivity to the JTF Commander while enroute, in the field, or away from established headquarters. This capability, developed in 2004 at JFCOM's Joint System Integration Command, was fielded using Limited Acquisition Authority. Four systems were delivered, one each to Combined Forces Command-Afghanistan (CFC-A), Multinational Force-Iraq (MNF-I), Multinational Corps-Iraq (MNC-I), and Supreme Headquarters Allied Powers Europe. A fifth system is

currently under development, for delivery to CJTF- 76, located in Bagram, Afghanistan, in Fiscal Year 2005.

- Change Detection Work Station (CDWS). An outgrowth of the Joint Area Clearance Advanced Concept Technology Demonstration, CDWS is a multi-sensor recording device that allows aircraft flying over projected convoy routes to compare conditions along the route at different times and alert our forces on the ground to the presence of Improvised Explosive Devices. This technology, developed just last year and fielded through LAA, deployed to Iraq with the Air Combat Element of the 2nd Marine Expeditionary Force and is in use there today.

To emphasize, USJFCOM provides a bridge between current capabilities and future concepts. In support of the former, we address Combatant Commander shortfalls through near-term capability insertions; in support of the latter we support future operational requirements via the Joint Staff's Joint Capability Integration and Development System (JCIDS) process. We participate in all of the Department's Functional Capability Boards (FCBs), lead the Command and Control Functional Capability Board, and perform all capability document reviews. In support of the Acquisition process, we provide Joint Battle Management Command and Control Roadmaps and senior forums to discuss joint perspectives and priorities. The USJFCOM role in these processes results in partnerships that influence resources and acquisition decisions.

USJFCOM's focus on improving Joint battle management command and control is powered by, and requires continued strong Congressional support to accelerate improvements in Joint command and control. U.S. Joint Forces Command looks forward to working with the Committee to

provide the men and women of our Armed Forces the Joint command and control capabilities they need today and the transformational capabilities they will require in the future. Thank you.