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Chairman Lieberman, Ranking Member Cornyn, and distinguished Members of the Committee: on behalf of the Army and our great Soldiers, Lieutenant General Thompson and I thank you for the opportunity to appear before you today to discuss Army Modernization. Army modernization is instrumental to ensuring that our Army remains the preeminent landpower on earth, one fully capable of meeting any and all missions across the full spectrum of operations. Our modernization strategy is designed to ensure that we accomplish every mission, now and in the future, and that our Soldiers are never in a fair fight.

Today's testimony focuses on the Army modernization strategy, which is informed both by lessons learned from the wars in Iraq and Afghanistan and the Army's operational concept of full-spectrum operations, recently unveiled in the revised Field Manual (FM) 3-0, *Operations*.

FM 3-0 reflects the Army's thinking, in an era of persistent and complex conflict, where *stability operations* are given the same level of importance and emphasis as offensive and defensive operations (Figure 1). Stability Operations encompass various military missions, tasks, and activities conducted outside the United States in coordination with other instruments of national power, to maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. The

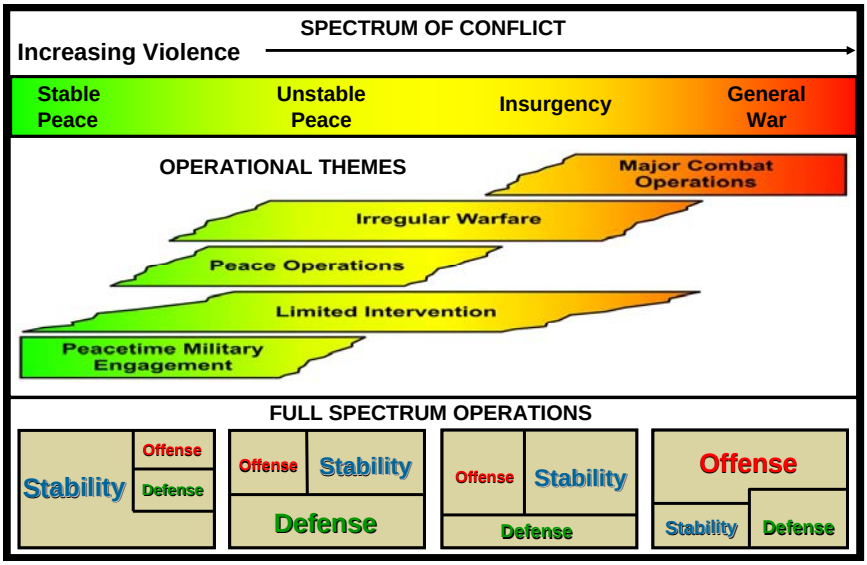

Figure 1

goal of stability operations is to create conditions that support the transition to legitimate host nation governance, a functioning civil society, and a viable market economy.

Given the nature of the current international security environment, Soldiers will consistently operate in and among the people of the world, conducting operations in an environment fundamentally human in character. FM 3-0 also recognizes the unparalleled power of information in modern conflict, and the fact that information has become as important as lethal action in determining the outcome of operations. In addition, FM 3-0 provides the detailed doctrinal foundation to optimize the operational agility that we have designed into our modular formations, giving us true capability across the full spectrum of operations. Finally, concepts embedded in FM 3-0 will shape future Army Budgets.

Modernization provides the materiel solutions to improve capabilities that enhance the Army's ability to conduct full-spectrum operations, and meet the demands of persistent conflict in the 21st Century.

The Army Modernization Strategy seeks to ensure that we remain the preeminent Landpower on earth, an expeditionary force with full spectrum capabilities. To achieve this end, our strategy employs four ways or what we call the four elements of modernization. They are:

- Rapidly field the best new equipment to the current force
- Upgrade and modernize existing systems within modular formations to ensure all Soldiers have the equipment they need
- Incorporate new technologies derived from Future Combat Systems (FCS) research and development as they become available
- Field FCS Brigade Combat Teams (FCS BCT)

The Army has modernized core systems and updated key weapons and equipment since the early days of the war; working steadily to improve speed and efficiency in this area. Modernization is essential for closing both current and future capability gaps.

Modernizing the Army's Tactical Wheeled Vehicle (TWV) fleet is a critical imperative that strives to provide the Soldier the best possible protection, payload and performance in each vehicle in the fleet. The TWV Strategy will achieve the proper balance between numerous competing factors: support of current operations and fleets, Army Transformation and future fleet capabilities while optimizing strategies for procurement, recapitalization, and sustainment. The strategy seeks to ensure fleet viability and combat effectiveness for the next three decades. A modernization plan is being developed for each category of the Tactical Wheeled Vehicle fleet: light, medium, and heavy wheeled vehicles and trailers. A couple of key vehicles of our TWV Strategy are the Mine Resistant Ambush Protected (MRAP) vehicle and Joint Light Tactical Vehicle (JLTV).

MRAP vehicles are being procured as rapidly as possible and provide more advanced, armored protection against the greatest casualty-producing threats in Theater, underbelly improved explosive devices (IEDs). It is a new class of medium tactical vehicle that provides our operating forces multiple mission-role platforms capable of mitigating roadside bombs and mines. It has already proven its effectiveness on the battlefield.

JLTV is a Joint program with the U.S. Marine Corps that will replace the Up Armored High Mobility Multipurpose Wheeled Vehicles (UAH). As currently planned, JLTV has the potential to provide significant and revolutionary increases in protection, performance, and payload capabilities beyond those available in the current HMMWV or UAH. This family of vehicles will provide greater force protection and payload than the current UAH. The JLTV has been designated as an FCS complementary system.

We have made great progress in Army Aviation modernization. Army Aviation is transforming and modernizing to meet current and future full spectrum aviation requirements. The aviation transformation plan restructures Army Aviation warfighting units into Combat Aviation Brigades, ensuring that aviation units are modular, capable, lethal, tailorable, and sustainable. Their inherent

mobility, flexibility, agility, lethality, and versatility are instrumental in enabling the air-ground task force commander to conduct decisive Joint operations. The transformation plan also addresses the urgent need to address the steadily deteriorating condition of the aviation fleet, and accelerate Army National Guard and Army Reserve modernization. The affected Aviation platforms include the Armed Reconnaissance Helicopter, the UH-60M/HH-60M Black Hawk, C-27J Joint Cargo Aircraft, commercial, off-the-shelf UH-72A Lakota Light Utility Helicopter, CH-47F Chinook, and AH-64 Apache helicopter fleet.

Success of the Army's Battle Command Strategy is indispensable to Army future operations. We are developing robust networking solutions that will enable Commanders, Leaders, and Soldiers to access critical data and information any-where, anytime. We are accomplishing this by migrating existing systems where possible and developing new Net-Ready programs to meet the unique challenges of a net-centric environment resulting ultimately in a robust and revolutionary communications capability while on the move - anywhere on earth.

Central to this overall strategy is our approach of moving beyond the era of 'stovepiped' networks to deliver multi-functional, multi-band tactical Army communications systems. The Joint Tactical Radio System (JTRS) will contribute to that capability. JTRS is 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 in 2010 when Spin Out 1 delivers a Sensor-to-Soldier link through the network.

As the Army's cornerstone modernization effort, the FCS program will provide our Soldiers an unparalleled understanding of their operational environment, increased precision and lethality, and enhanced survivability. The FCS program is structured to bring advanced capabilities to today's force as rapidly as possible in a process known as "Spin Outs." Spin-Outs are a product of the technological capabilities achieved from FCS research and development.

FCS capabilities will be integrated into our current Brigade Combat Teams (BCTs) to increase their capabilities and to maximize their interoperability with FCS BCTs. Integrating Spin-Outs and other technologies onto other combat platforms, such as the Abrams, Bradley, and Stryker, will allow these battle-proven platforms to fight in concert with FCS BCTs well into the 21st century.

Indeed, several "FCS like" capabilities are already being used in combat operations in Iraq and Afghanistan and are protecting our Soldiers today. These technologies include:

- Frag Kit 5 armor protection is used on Up-Armored HMMWVs.
- The Gas Micro Air Vehicle, an early precursor of the FCS Class 1 Unmanned Air Vehicle, has been highly effective in Navy explosive ordnance disposal operations in Iraq and is planned for use by 25th Infantry Division Soldiers in urban warfare operations in Iraq this year.
- The iRobot Packbot® robot being used by Soldiers and Marines in Iraq and Afghanistan is the precursor of the FCS Small Unmanned Ground Vehicle. This man-packable robot has been invaluable during urban warfare and explosive ordnance disposal operations. This is also a shining example of the ingenuity and entrepreneurial strength that small American businesses bring to enhance our national security.
- The Excalibur Artillery round that is currently being used in Afghanistan is being adapted for use with the FCS Non-Line-of-Sight Cannon.

Finally, the Army's concept of the Soldier as a System envisions equipping individual Soldiers with an integrated ensemble, providing mission tailorable capabilities. Figure 2 depicts the Soldier as a System concept and the relationships among Core, Ground, Air, and Mounted Soldiers. All Soldiers are equipped with the Core Soldier System,

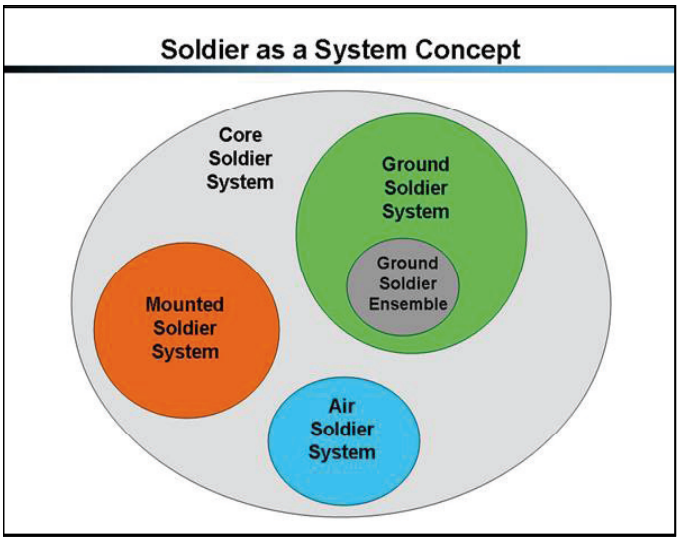

Figure 2

enabling them to train on, and perform Basic Warrior Tasks and Battle Drills. When added to the Core Soldier System, the Ground, Air, and Mounted Soldier Systems enable Soldiers to perform warfighting functions based on position and role within their unit.

Mr. Chairman, and Members of the Committee, on behalf of our Soldiers, we greatly appreciate the tremendous support we receive from this Congress. In order to successfully implement the plans we have shared with you today, we urge you to provide full, timely and predictable funding. The Army is modernizing, while simultaneously conducting wartime operations, and preparing for the future defensive challenges our Nation will likely face. Our challenge is to balance these two requirements to ensure that we can defend the Nation today and tomorrow. We never want our Soldiers to be in a fair fight. The Army's partnership with Congress demonstrates our collective commitment to ensure that we remain the preeminent Landpower on earth, an expeditionary Army, capable of full-spectrum operations – The Strength of the Nation. Thank you for this opportunity to appear before you today.