About Leidos

Leidos is a FORTUNE 500® science and technology solutions leader working to address some of the world’s toughest challenges in national security, health and engineering. The Company’s 21,000 employees support vital missions for our government and the commercial sector, develop innovative solutions to drive better outcomes and defend our Nation’s digital and physical infrastructure from ‘new world’ threats. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately $5.77 billion for its fiscal year ended January 31, 2014 after giving effect to the spin-off of the Company’s technical services and information technology business.

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Virtual aviation simulator, enabling helicopter crews to train together
Innovative Collective Crew Member Training

The Non-Rated Crew Member Manned Module (NCM3) trains helicopter crew members in critical gunner, hoist, and sling-load operating training in a three-dimensional (3-D) virtual training environment.

The NCM3 can maximize the safety, efficiency, and currency of available actual flight hours through crew familiarization, crew coordination training, and virtual mission rehearsal in a realistic, collective training, scenario-based environment. The NCM3 program provides a cost-effective approach to training crews by minimizing fuel and ammunition usage.

**NCM3**

The NCM3 simulator is among the first trainers for the rear portion of the CH-47 Chinook and UH-60 Blackhawk aircraft. The simulator trains crew members on critical individual and crew tasks such as gunnery, sling load, and hoist operations. The NCM3 directly supports the Army’s Aviation Combined Arms Tactical Trainer (AVCATT) program with capabilities that integrate with AVCATT and enable the full collective training of helicopter pilots and their crews.

**CRITICAL GUNNER, HOIST, AND SLING-LOAD OPERATOR TRAINING**

Leidos’ NCM3 simulator supports the realistic training of helicopter gunners, hoist and sling-load operators. NCM3’s major training task scenarios for hoist, sling loads operation, and aerial gunnery support and defense include:
- Virtual replenishment of supplies in contemporary combat and noncombat locations
- Hoisting for survival and medical evacuation
- Water bucket (bambi) operations for firefighting operations
- Gunnery training for door and ramp gunners

The hoist and hoisting capabilities of the NCM3 enable the operator to train on retrieving personnel out of the water, woods, and other challenging terrain as well as injured members on stretchers, and supply transport.

The sling load operator is trained on hook-up based on the location of the virtual hookman on the ground, who attaches the cargo to the hoist. The NCM3 sling load operator’s virtual goggles provide a realistic, three-dimensional (3-D) view of the hookman and all retrieval tasks and cargo. The 3-D goggle snap onto the soldier’s actual helmet in place of night vision goggles, enabling the wearing of warfighting equipment inside the helicopter simulator.

The non-rated basic gunnery position in the NCM3 simulator enables the gunner to train on defending sling load operations, transport, and supply replenishment in dangerous remote areas and a variety of weather conditions. The task training scenarios also familiarize gunners with taking offensive action against targets. The NCM3 gunnery position uses a real demilitarized M240 weapon with sensors to identify the targets.

**MOBILE TURNTKEY TRAINING SYSTEM**

The NCM3 simulator can go wherever the training need exists. Leidos delivers two manned modules in a 53-foot mobile trailer. The NCM3 simulators can operate independently, or be integrated with an AVCATT simulator to train the entire crew in one simulated aircraft.

**Each NCM3 includes its own instructor operator station (IOS) with an embedded, collective, after action review (AAR). The Scenario Editor from the Synthetic Environment Core (SE Core) makes it easy to create additional task training scenarios.**

**INTEGRATION AND INTEROPERABILITY**

The Leidos NCM3 simulators, including the Synthetic Environment Core (SE Core) and One Semi-Automated Forces (OneSAF®), can be integrated with U.S. Army simulation systems.

The two systems support the integration of new functionality into the NCM3, and help to ensure interoperability between the NCM3 and other simulation trainers.

**SE Core** is a set of common virtual components for virtual military training simulation systems, and OneSAF is a composable, computer-generated constructive simulation system that trains warfighters on a wide range of military operations.

**AVCATT** is a mobile, multi-station virtual simulation device with six man-modules that are reconfigurable to any combination of attack, reconnaissance, lift and/or cargo helicopters in the current U.S. Army inventory.

The NCM3 provides integrated individual and collective training for the entire crew, enabling members in the back of the helicopter to coordinate and interact with the pilots up front. Today, in real-time, helicopter crews and pilots can “train as they fight” in realistic, high-fidelity scenarios that mirror real-world activities and interact with air and ground combat operations.

**CRITICAL HELICOPTER GUNNER, HOIST, AND SLING-LOAD OPERATOR TRAINING**

The NCM3 directly supports the Army’s Aviation Combined Arms Tactical Trainer (AVCATT) program with capabilities that integrate with AVCATT and enable the full collective training of helicopter pilots and their crews.

**Deep Expertise in Virtual Simulation**

Leidos virtual simulators provide efficient, cost-effective, flexible, measurable, and trackable air and ground simulation training for airmen and soldiers. Effective training on military aircraft and ground vehicles is essential for battlefield mobility, mission coordination, survivability, and success.

With over 20 years of experience in modeling & simulation and training, Leidos delivers innovative systems, products, and services across all domains – live, virtual, constructive, gaming, and convergence – around the globe.