Lockheed Martin Unveils Exoskeleton Technology At AUSA Winter Symposium

Lockheed Martin debuted an advanced robotic exoskeleton designed to augment Soldiers' strength and endurance and prevent their premature fatigue.

The Human Universal Load Carrier (HULC(TM)) exoskeleton, introduced at the Association of the United States' Army Winter Symposium in Fort Lauderdale, FL, will meet future mobility and sustainment needs of Warfighters by providing strength and survivability. Under an exclusive licensing agreement with Berkeley Bionics(TM) , a world leader in exoskeleton technologies, Lockheed Martin will advance the development of the HULC design to provide Soldiers a powerful advantage in ground operations.

"With our enhancements to the HULC system, Soldiers will be able to carry loads up to 200 pounds with minimal effort," said Rich Russell, director of Sensors, Data Links and Advanced Programs at Lockheed Martin Missiles and Fire Control. "Lockheed Martin is developing an entire line of ground Soldier technologies that will improve Warfighters' ability to effectively complete their missions."

Dismounted Soldiers often carry heavy combat loads that increase stress on the body, leading to injuries and exhaustion. HULC transfers the weight from heavy loads to the ground through the battery-powered, titanium legs of the lower-body exoskeleton. An advanced onboard micro-computer ensures the exoskeleton moves in concert with the individual. HULC's completely un-tethered, hydraulic-powered anthropomorphic exoskeleton design allows for deep squats, crawls and upper-body lifting with minor exertion.

Lockheed Martin's advanced technology systems will now include ground Soldier solutions such as wearable situational awareness equipment and mobility assistance systems. Additional technological advancements will focus on specific user needs and performance requirements. Lockheed Martin is also exploring exoskeleton designs to support industrial and medical applications.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 146,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2008 sales of $42.7 billion.

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First Call Analyst:
FCMN Contact:

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