

Lockheed Martin To Enhance Space Systems Development With Opening Of New Virtual Laboratory

DENVER, Jan. 24, 2011 /PRNewswire/ -- Lockheed Martin plans to increase the affordability and efficiency of space system development with the opening of a new advanced technology and virtual simulation facility, known as the [Collaborative Human Immersive Laboratory](#) (CHIL). The CHIL, located at Lockheed Martin Space Systems Company headquarters in Littleton, Colo., integrates several virtual reality technologies enabling engineers and technicians to validate, test, and understand products and processes virtually before creating them physically. The result is a reduction in risk with savings in both time and cost.

The company will leverage the CHIL for a variety of programs, including the U.S. Air Force's next-generation Global Positioning System, known as [GPS III](#) and NASA's [Orion](#) Crew Exploration Vehicle. The laboratory can be applied to a range of space systems, including satellites, exploration spacecraft, launch vehicles and missile defense systems. Lockheed Martin Aeronautics has a similar facility, the Human Immersive Laboratory ([HIL](#)) that is already being used to reduce the life-cycle cost of aircraft.

"As customer budget pressures continue, and the need for critical space assets escalates, the CHIL will help increase the affordability and value of our programs," said Jeff D. Smith, Lockheed Martin Space Systems Company's director of Special Projects. "While similar technology is being used in the movie industry to create fictitious worlds, the CHIL is real, and it is driving affordability into our products."

Using motion tracking and virtual reality technology, the CHIL creates a unique collaborative virtual environment for exploring and solving problems quickly, and where hardware designs and manufacturing processes can be fine tuned before production or development begins. This allows engineers to identify risks and increase efficiencies early in program development, when the cost, risk and time associated with making modifications are low.

With a range of technology applications, the CHIL can improve every stage of a program, from the concept phase to the operations and sustainment phase. Using the CHIL, engineers can:

- Optimize and validate processes virtually before releasing them to manufacturing
- Identify bottlenecks, collisions and workflow issues before they happen
- Improve resource utilization, material flow and producibility
- Reduce rework and mitigate program risk.

The CHIL integrates a variety of technologies including motion capture, immersive and portable systems to create its collaborative environment.

Learn more about the CHIL: Watch the [video](#), read the [brochure](#) and visit the [webpage](#).

Lockheed Martin Space Systems Company designs and develops, tests, manufactures and operates a full spectrum of advanced-technology systems for national security and military, civil government and commercial customers. Chief products include human space flight systems; a full range of remote sensing, navigation, meteorological and communications satellites and instruments; space observatories and interplanetary spacecraft; laser radar; ballistic missiles; missile defense systems; and nanotechnology research and development.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 133,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2009 sales from continuing operations were \$44.0 billion.

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