Lockheed Martin Pioneering Game-Changing Unmanned Systems

Lockheed Martin is developing unprecedented technologies for the next generation of unmanned systems.

"We began our unmanned system work in 1964 with the Mach 4+ D-21. Since that time we have taken a strategic approach to this market, choosing to focus our efforts on next-generation needs for our customers," said Frank Cappuccio, Lockheed Martin vice president and general manager of the corporation's Advanced Development Programs (ADP), also known as the Skunk Works(R).

"The battlespace is evolving and what works today may not be effective tomorrow. We believe that unmanned systems must work in concert with manned systems to be effective," Cappuccio said. "In space, water, sky or ground we are developing network-enabled, next-generation unmanned systems to be key force multipliers for our customers in the future. Invention is what we do and the solutions that we are developing now are pretty exciting."

One technology being explored is the ability to "morph." Morphing technology expands the envelope of an air vehicle by radically changing the critical physical characteristics of the platform in flight. The end result is a single platform that can perform both long-loiter surveillance and high- speed, short-dash, penetration missions. The combining of missions that are traditionally thought of as unachievable by a single aircraft could become a reality shortly. "Imagine the system utility for the military," Cappuccio said.

The technology explored through morphing enables other next-generation capabilities, including a submarine-launched unmanned aerial vehicle (UAV) called the Multi-purpose UAV and a full scale version of a Morphing UAV, called Hunter-Killer. Both vehicles are in the conceptual stage at this time and promise pioneering capabilities for unmanned systems.

"This is what we do best, take a challenge that's not been done before and figure out how to make it a reality. It isn't easy, and there are always challenges along the way, but we have found this is the best approach to making game-changing advances -- we innovate," said Cappuccio.

BACKGROUND INFORMATION

The Skunk Works, which is part of Lockheed Martin Aeronautics, is the industry leader in innovative aerospace solutions providing expertise, novel approaches, cutting edge technology and a commitment to quality and timely performance to its customers.

Lockheed Martin Aeronautics, a business area of Lockheed Martin, is a leader in the design, research and development, systems integration, production and support of advanced military aircraft and related technologies. Its customers include the military services of the United States and allied countries throughout the world. Products include the F-16, F/A-22, F-35 JSF, F-117, C-5, C-130, C-130J, P-3, S-3 and U-2. The company produces major components for the F-2 fighter and is a co-developer of the C-27J tactical transport and T-50 advanced jet trainer.

Headquartered in Bethesda, Md., Lockheed Martin employs about 130,000 people worldwide and is principally engaged in the research, design, development, manufacture and integration of advanced technology systems, products and services. The corporation reported 2004 sales of $35.5 billion.

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