MARINE CORPS
WARFIGHTING
LABORATORY

DRAGON EYE

fact sheet

Dragon Eye is a 5-pound, back-packable, modular unmanned aerial vehicle (UAV) designed to provide the Marine small-unit commander with a reconnaissance and surveillance capability to see over the next hill or building. It is an important component in the Marine Corps Warfighting Lab's effort to develop a reconnaissance, surveillance and target acquisition network of sensors (Project RSTA) that portrays a picture of the battlespace, enabling enhanced situational awareness for small-unit leaders on the ground.

Background: Dragon Eye is a rapid acquisition program managed and partially funded by the Warfighting Lab. It is also funded by the Office of Naval Research and was built initially by the Naval Research Laboratory. Dragon Eye is a direct result of the Secretary of the Navy's small UAV initiative and fulfills the Interim Small Remote Scouting System requirement supporting Marine Corps Systems Command.

Description: The Dragon Eye UAV is battery-operated and capable of fully autonomous flight. Made of lightweight material, it is designed to disassemble into five separate pieces and is intended to be carried in an individual Marine's pack. Dragon Eye has a 45-inch wingspan once assembled and weighs approximately 5 pounds. Missions are programmed via a wireless modem that is integrated into a 12-pound ground control station. After being launched via hand or bungee cord, Dragon Eye flies to preassigned Global Positioning System waypoints. If for some reason the operator needs to alter Dragon Eye's waypoints after launch, it has the ability to be reprogrammed in flight. Its sensors include two full-motion, color, low-light and infrared cameras, each capable of transmitting video line-of-sight to a range of 10 kilometers. Dragon Eye flies up to speeds of 35 knots and has a battery endurance of one hour. Experimentation occurred during the Kernel Blitz Experiment with 3rd Battalion, 5th Marines in June 2001 and 3rd Battalion, 7th Marines during Millennium Challenge in August 2002. This experimentation provided the operating forces an early opportunity to gain familiarization with the small UAV concept; develop tactics, techniques and procedures; and identify potential doctrine, organization and training issues.

Deliverable Products: The Marine Corps received delivery of 40 Dragon Eye systems in 2002 for operator evaluations. A system consists of three air vehicles and one ground control station. Total research and development funding for FY01 was $3 million and $3.2 million for FY02. The Marine Corps is responsible for procurement and fielding, scheduled to begin in the summer of FY03. Target cost at full-rate production is approximately $60,000-70,000 per system. The Marine Corps plans eventually to purchase 311 systems through FY06.

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