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Feature Article

Marine Operational Squadrons Will Be Equipped With Simulators

Training and Simulation News

by **Sandra I. Erwin**

The Marine Corps' roadmap for building a new suite of flight simulators is driven by the need to offer aviators wider and more frequent access to training equipment, officials said.

The military services today envision that their simulation-based flight trainers will be "networked," said Navy Capt. Rory H. Fisher, program manager for aviation training at the Naval Air Systems Command. "The Marine Corps simulator master plan is attempting to do that, to take all the Marine platforms and create a network of flight simulators." The trainers will be applicable to all model series—the AV-8 Harrier, the F/A-18 Hornet, the EA-6B Prowler, the KC-130, and the AH-1W, UH-1N, CH-46E and CH-53E helicopters. The program's "end product," said Fisher, will be "networked flight simulators, both fixed-site and removable."

Last March, the Naval Air Warfare Center Training Systems Division (NAWC-TSD) awarded Lockheed Martin Information Systems, based in Orlando, Fla., a contract worth up to \$300 million to develop the Marine Corps simulator master plan. The company is expected to provide crew training, including simulator operations and maintenance, for all U.S. Marine Corps aircraft.

Jo-Anne Puglisi, program manager for the Marine Corps simulator master plan at Lockheed Martin, said the plan is to build a suite of simulators for the Corps' operational squadrons. "They are looking for the ability to train the operational pilots in their own squadrons and network together, across each community and across the entire Marine aviation community," Puglisi said in an interview. "It's a local network and a wide area network for all Marine aviation."

All the devices in this program will be new, she said. There will be "no legacy trainers." During the first year of the contract, the company only will perform a "detailed systems engineering analysis," said Puglisi. That means, "looking at each platform and its mission, looking at the technology in the training community," such as image generators, displays and networking

software.

Lockheed expects that NAWC-TSD will award a contract to start building the trainers in March 2001. The entire project, said Puglisi, should continue for about four to five more years. "We are spending 12 months doing the systems engineering and coming up with an agreement on requirements." The original Navy solicitation called for the procurement of two to four trainers per year. When the contract was announced in March, Lockheed estimated that 17 simulators would be completed by 2007.

These will be "deployable trainers," Puglisi said, "in the sense that they are inside enclosures that can be put on an 18-wheeler or on the back of an aircraft and deploy. ... They require a couple of days of installation and setup." The goal was to eliminate the need for expensive permanent facilities, because the trainers are designed to be used by operational squadrons, not training squadrons.

There are 16 companies on Lockheed's team for this program, but the firm has yet to decide how much of the work will be outsourced or performed in-house, Puglisi said. In a somewhat unusual arrangement, NAWC-TSD will be a program subcontractor, designing subsystems and hardware, developing code and software and conducting systems integration.

The trainers will include a combination of PC-based and high-end systems. "That is one of the technology trade studies being done in the contract," he explained. "We are working with aviation instructors at the Marine Air Warfare Tactics Squadron, in Yuma, Ariz." They are weapon tactics instructors who set the standards for Marine tactics training. "They are looking for high-fidelity trainers." Puglisi said. "PC is a technology we plan on using, but high-end is a definite requirement."

The existing "legacy" trainers will be kept in the training squadrons. The new trainers are for the squadrons that never had trainers before.