



Navy SBIR/STTR Success



Marine Common Aircrew Trainer Prototype

The MCAT-P simulators provide a high-fidelity training environment for Marine Enlisted Air Crews, while reducing flight hours needed for crew coordination, aerial gunnery and external load training. The extensive use of COTS components makes these simulators affordable and maintainable.

Topic Number: N03-190

SBIR Investment:
\$3,347,441

Phase III Revenue:
\$23,797,980

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About the Technology:

The Marine Common Aircrew Trainer - Prototype (MCAT-P) is a highly capable, projection-based prototype simulator system for aerial gunnery, crew coordination and external load operations. The high fidelity cabin, use of the trainees' own equipment, and a superb audio-visual system makes the training experience as close to reality as possible. The system has a 360-degree high fidelity view projected on curved screens - providing an immersive view similar to actual flight and eliminating the need for a motion base. It interfaces with the USMC Tactical Environment network for representing semi-automated forces and to interoperate with other aircrew trainers. The MCAT-P validates the technical requirements for a future USMC reconfigurable simulator for rotary and fixed wing aircraft supporting gunnery, crew coordination, aircrew communication, scanning, and external load operations.

Naval Benefit

The MCAT-P is capable of training UH-1Y, MV-22B and CH-53E aircrews in day, night, and Night Vision Glass (NVG) operations. The Marine Corps Aircrew / Crew Chief Trainer Prototype demonstrated a full-flight virtual training environment for gunnery and external load handling thereby saving the Navy considerable expense vs. live operations.

Transition

The Marine Common Aircrew Trainer Prototype 1 was initially built as a Phase II SBIR project. MCAT-P1 trains CH-53E Enlisted Aircrew in crew coordination, aerial gunnery, and external load handling. Pathfinder Systems subsequently received a \$7.5M contract from the Naval Air Warfare Center, Training Systems Division to build and document the Marine Common Aircrew Trainer Prototype 2 (MCAT-P2) to be delivered in 2013. It will train CH-53E, MV-22B and UH-1Y enlisted aircrews. It will be able to operate as a stand-alone training device, or interoperate with CH-53E, MV-22B and UH-1Y Weapons Trainers.



Pathfinder Systems