DEPARTMENT OF THE NAVY

NAVY SBIR/STTR SUCCESS STORY

THE OPERATOR MACHINE INTERFACE ASSISTANT (OMIA)

Part-Task Training Tool for the MH-60R (Romeo) & MH-60S (Sierra) helicopters

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THE CHALLENGE

The Navy had an interest to train new pilots and keep current pilots up-to-date and evolving helicopter software. Options to do this include utilizing high-cost and limited availability Tactical Operational Flight Trainers (TOFTs), or even more expensive helicopter flight time. A PC- and/or web-based flexible training system that can function as a part-task trainer for general functionality, as well as being expandable to support in-depth training in particular subsystems, resulting in huge savings for the Navy. Such a solution enables anytime and anywhere training.

THE TECHNOLOGY

OMIA is a flexible, low-cost, PC- and/or Web-hosted Part-Task Trainer (PTT) crew trainer for the Navy's MH-60S and MH-60R helicopters, training crew members on the use of the Common Forward Looking Infrared (FLIR) and RADAR cockpits. It supports indepth training in specific subsystems, including active/passive acoustics and FLIR as well as supporting the integration of flight simulator software, as well as optional hardware including the FLIR Hand Control Unit (HCU) and the trackball. OMIA supports three training configurations: Sierra Pilot, Romeo Pilot, and Romeo Sensor Operator.

THE TRANSITION

The U.S. Navy's Program Management - Air (PMA)-205 via the SBIR program and follow-on Phase III efforts has managed the developed, deployed, and the periodic updating of the flexible, low-cost PChosted and WEB-hosted Part-Task Trainer (PTT) for the Navy's MH-60S (Sierra) and MH-60R (Romeo) helicopters called the OMIA. OMIA evolves as the helicopter's common cockpit evolves. The Navy has an unlimited license to use OMIA and has been using the trainer since the early 2000s for its fleet training program. OMIA is available to crewmembers at land and sea.

THE NAVAL BENEFIT

OMIA's capabilities and flexibility have greatly benefited the Navy by enabling the Navy to teach Navy Pilots and Aircrew how to operate both the MH-60S (Sierra) and MH-60R (Romeo) helicopters cost effectively from anywhere at any time. This also allows crew members to learn as much as possible before using more expensive training options such as full flight simulators, saving such assets for more complex training that can only be performed on such training devices. The OMIA use has greatly reduced the overall demand for simulator time for basic training of the common cockpit. Since the Navy has unlimited access to OMIA, it is used by both training and fleet squadrons, as well as being used by maintenance squadrons.

THE FUTURE

The Navy will continue to use OMIA for MH-60R and MH-60S initial and refresher training. OMIA is also available to foreign countries that utilize the MH-60R, such as Australia.

> "THE DEVELOPMENT OF THE OMIA-ATS HAS SIGNIFICANTLY REDUCED THE DEMAND SIGNAL FOR THE TRAINING SIMULATORS (TOFT'S) TO TEACH STUDENTS BASIC MISSION DISPLAY AND ACOUSTICS INCREASING TOFT AVAILABILITY FOR MORE COMPLEX TRAINING TASKS. THIS ALSO HELPED TO REDUCE TRAINING BOTTLE NECKS, ALLOWED MORE IN-DEPTH TRAINING TO TAKE PLACE IN THE TRAINING SIMULATORS AND REDUCED THE NEED FOR A SECOND SHIFT TO SUPPORT TRAINING. THIS SBIR HAS BEEN A MODEL FOR WHAT A SUCCESSFUL SBIR PROGRAM CAN DO FOR THE FLEET AND THE CURRENT PHASE III TOPIC WILL ALLOW THE GOVERNMENT TO QUICKLY CONTRACT FOR SYSTEM CONFIGURATION UPDATES WHEN THE MH-60 PROGRAM IS UPDATED, WHICH WILL ALLOW TRAINING DETACHMENTS TO TRAIN NEW PILOTS AND AIRCREW IN THE LATEST AIRCRAFT CONFIGURATION."

Sonja Sacket
H-60 FMS Courseware IPT Lead
PMA-205