MRT preps air crews for any possibility

Story and photos by Glenn S. Robertson, 90th Missile Wing Public Affairs

Training helicopter aircrews can be costly in both time and resources. A recent service contract promises to increase unit readiness, all while providing training opportunities that are otherwise unavailable.

The 582nd Operations Support Squadron now houses a Mission Rehearsal Training system designed and developed by Kratos Defense and Security Solutions, headquartered in San Diego, Calif.

Training conducted on the MRT is fully immersive, allowing for each student to experience the "fog of war" in a realistic and structured training environment, said Wade Koch, Vice President of Kratos Aircrew Training at Kratos Training Solutions, based in Orlando, Fla.

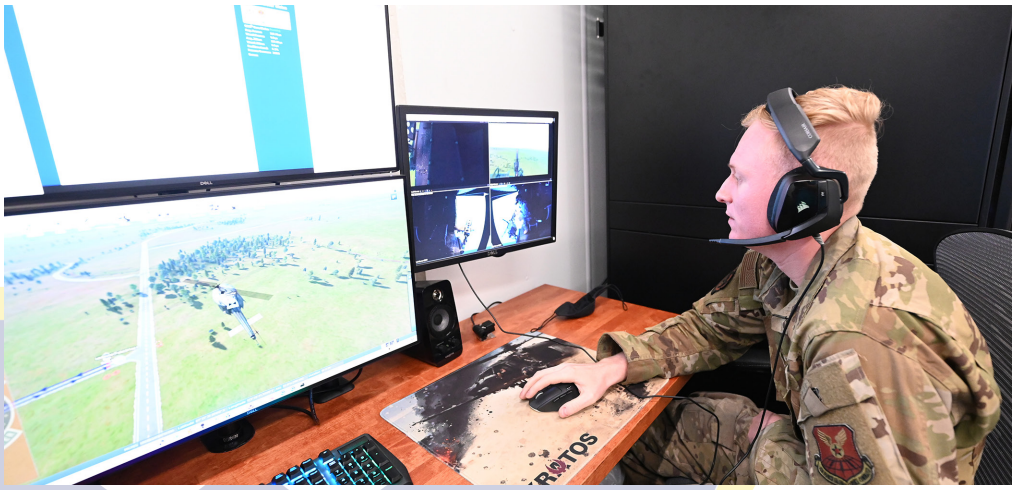
"The visual database used in this system is a game-based virtual environment offering the entire planet down to one square meter providing endless possible training locations around Air Force Global Strike Command's operating areas and the globe," said Koch. "Automated forces can be generated on the fly with the ability to edit each individual entity health and training levels, creating a realistic virtual opposing force of potential enemies these warfighters might experience during real world operations."

By allowing crews to conduct realistic training in a controlled environment, the MRT has greatly benefitted the aircrew training pipeline, according to Lt. Col. Andrew Billhartz, 582 OSS commander.

"Over the last year, the MRT has been used to train 59 new aircrew members. The efficiency of simulator training reduced the training timeline from six months to three months per student, start to finish," said Billhartz. This decreased the initial mission upgrade training burden on the operational units by almost 300 flight hours, allowing those units to concentrate on advanced training and integrated training exercises."

The simulator's training efficiency is also showing itself to be a benefit to combat readiness rates across the three helicopter squadrons, according to Billhartz.

"Currently, the three flying squadrons are averaging in the 80% to 90% range for combat mission readiness rates," said Billhartz. "Pre-simulator, we were sitting at about 50% to 60%."



Senior Airman Derek Dehass, MRT instructor and special mission aviator with the 582nd Operations Squadron oversees a training simulation with the Mission Rehearsal Training System, Sept. 25, 2021 in the helicopter hangar on F..E. Warren Air Force Base, Wyoming. Training conducted on the MRT is fully immersive, allowing for each student to experience "fog of war" in a realistic and structured training environment.



Airman 1st Class Nickoles Ashley, flight engineer with the 37th Helicopter Squadron, fires a weapon during a simulation using the Mission Rehearsal Training System, Sept. 25, 2021 in the helicopter hangar on F.E. Warren Air Force Base, Wyoming.

Another feature of the MRT lauded by the personnel is the fully immersive and true-to-life simulation of combat scenarios.

"The MRT is a great mission rehearsal device," said Master Sgt. Michael Wright, superintendent of the 582 OSS. "It allows our crews to train enhanced mission sets, including close-air support and vehicle interdiction as well as basic aerial gunnery."

The Mixed Reality technology allows the student to see other crewmembers and even their own hands in the simulation, providing an extra layer of realism during training in combat scenarios.

"Students can go into the simulator and operate an electrically-actuated weapon that simulates gun malfunctions and correct those malfunctions in virtual flight," said Senior Airman Derek DeHass, MRT instructor and special mission aviator with the 582 OSS.

In addition to the simulator's aircrew environment trainer, it also includes an accompanying Ground Party Simulator which allows Security Forces personnel to integrate with the virtual environment.

"The Ground Party Simulator accompanies the aircrew trainer and allows Forward Observers to train in tandem with aircrew personnel," said Koch. "This allows for better integrated training between aircrew and Security Forces."

The MRT is proving to be a vital training investment for the 582nd Helicopter Group and its flying squadrons, ensuring a more prepared and lethal fighting force in support of the nuclear security mission.