Teaching Marine Commanders to Detect Hidden Threats

Your squad has been tasked with a convoy mission through a town with suspected insurgent activity. As a surveillance operator, you need to spot the threats and alert your team before it's too late.

You peer down from a UAV through an infrared camera analyzing and scrutinizing the happenings of a seemingly ordinary town. You see farmers in fields, children coming from and going to school, families en route to and from the marketplace, and religious services – everything seems normal but your training tells you that you need to look ahead. That's when you notice signs of suspicious behavior: people moving to rooftops looking to the sky for incoming aircraft, armed civilians lurking behind corners, and most dangerous of all, a child wearing a heavily laden vest. You use your comms channels and report the potential threat to your squad leader.

The ability to remotely monitor the activities and behavior or people near your troops, gives you the chance to avert disaster.

To successfully protect troops in the modern world, military commanders need the tools and the training to "get eyes on" potential threats, detect suspicious behavior, and identify dangerous situations. But seeing a threat isn't enough! You have to know how to communicate using the proper channels to be successful. Learning these skills takes training. With simulation, you can launch a UAV with an infrared sensor in a threatening environment and practice virtually how you would handle the situation.

The U.S. Marine Corps Tactical Operations Group (MCTOG) wanted to create an environment for exactly this reason. Their goal was to have company commanders envision training missions and in the same day, work with staff to quickly populate a virtual environment that modeled those missions, then train ISR tactics, techniques, and procedures. MCTOG's simulation needed friendly forces, opposing forces, and civilian populations acting naturally (pattern-of-life), as well as networks of insurgents covertly working to emplace improvised explosive devices (IED) in this crowded setting. To be effective, the process had to happen quickly.

MÄK worked with the Marines to build the training environment they were looking for. MÄK's ECOSim helped paint this picture of the cilivian/insurgent town environment, in combination with their Semi-Autonomous Force (SAF). With ECOSim, Marine captains practice commanding searches, patrols, and detentions, all while monitoring the town using ISR data provided by UAS, stationary cameras, and other report feeds. MÄK worked with the Marines to develop artificial intelligence (AI) models of all the needed behaviors, 3D models of buildings and human characters, and user interface enhancements to make scenario creation simple enough to learn and use in the same day.

With a simple mouse click, the small unit leader places an entire building full of people people in the simulated town. By adding a dwelling, a farm, or a market place, he's placing more than just that structure; he's giving the scenario a network of simulated characters that come with the building, each character already programmed to go on with its daily activities. With a virtual world full of characters milling about, the bad guys plotting to detonate an IED become that much more difficult to detect. And with the ability to create scenarios the same day as the training, instructors are able to customize the training to the skill level of the trainees.

CUSTOMER SUCCESS

With the ECOSim small unit leader interface (SULI), commanders can deploy companies and squads, as well as control the behavior of hundreds of troops. The SULI enables leaders to set company/squad formations, maneuver them through the environment, and make them interact appropriately with the civilian population while engaging the enemy in firefights as necessary.

You can take advantage of ECOSim technology too. Even if you're not creating a scenario to learn how to detect threats like MCTOG, MÄK can work with you to build your own human character tactics. Want to simulate an office building full of activity? We can help you place an office park your simulation scenario in a couple of clicks, so that the entire area comes alive with human activities like going to lunch, taking a smoke break, and coming and going from work. We can help you easily and quickly bring your simulation to life.

To learn more about how we can help you, reach out today at info@mak.com!