

DHS Science and Technology Directorate

Firefighter Incident Commander Training Simulator

Immersive Training for Firefighters

Across the country, incident commander training is viewed as a critical part of fire scene readiness and safety. However, this training can often vary from department to department.

Unsatisfied with traditional training techniques, the Orange County (Florida) Fire Rescue Department (OCFRD) partnered with the University of Central Florida's Institute for Simulation and Training (UCF-IST) to create a modernized training program for lieutenant, captain and battalion chief incident commanders (IC).

For this project, UCF-IST conducted a rigorous performance and needs analysis on OCFRD's Incident Command Academy. This analysis identified key environmental cues and critical skills that led to specific decision points and tactical direction for ICs. Using this information, UCF-IST created an engaging, performance-based, multimedia training program and unique immersive simulator that allowed ICs to learn and practice critical skills through scenario-based learning. In addition, the open-ended nature of the simulation allows for multiple personnel to participate, increasing crew coordination through collective team training.

Demonstrated Success & Next Steps

Since completion, OCFRD trainers have overseen more than 600 firefighters complete the program, which employs pre-training web modules, step-by-step instruction and e-learning activities designed to gradually guide the IC's path through the instructional material and interactive technology, thereby improving their comfort level and acceptance of the program. OCFRD reported near unanimous improvements in the tactical IC performance and morale of battalions and their acceptance of this modernized training academy.

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is exploring a partnership with UCF-IST to advance the technology for application to the Next Generation First Responder (NGFR) program. This capability provides an extensible testbed for DHS S&T to experiment with new NGFR technologies and training concepts. DHS S&T can use the system to test emerging concepts, such as delivery of geospatial information (maps, building layouts, etc.) that will be part of the first responders' future tool suite.

