

An example of Air Force supported SBIR/STTR technology that has been transitioned into an Air Force or other DoD system or subsystem or used by Air Force test ranges and facilities or maintenance depots.

**SBIR Topic Number:**  
 AF03-053

**SBIR Title:**  
 Time Critical Targeting  
 Training and Rehearsal  
 Environment

**Contract Number:**  
 FA8650-04-C-6448

**SBIR Company Name:**  
 MAK Technologies,  
 Cambridge, MA

**Technical Project Office:**  
 AFRL Human  
 Effectiveness  
 Directorate, Warfighter  
 Readiness Research  
 Division, Mesa, Arizona



**Left: Trainees from the 111th ASOC in Seattle, Washington, work with UK ASOC personnel during a joint training exercise. Right: Controllers for the ASOC training exercise operate QuickStrike and act as white cell role players.**

## QuickStrike: An Air Force Operations Staff Trainer

- The Air Force needs a commercial-off-the-shelf trainer, using gaming technology, that can be used by members of an Air Support Operations Center (ASOC) to improve the critical thinking, coordination, and communication skills associated with their mission to find, fix, track, target, engage, and assess dynamic targets
- MAK Technologies developed QuickStrike – a realistic, deployable simulation environment that can be used to support more effective individual skill and team process training
- MAK Technologies was awarded a contract by the Air Force Research Laboratory to further develop and field a simulation supported training capability at ASOC squadrons
- The institutional adoption of QuickStrike for ASOC training represents a major shift away from heavyweight wargaming systems that require large staffs to execute expensive and infrequent exercises towards a lightweight, user-driven, deployable system

## Air Force Requirement

The Air Force needs a commercial-off-the-shelf trainer, using gaming technology, that can be used by members of an Air Support Operations Center (ASOC) to improve the critical thinking, coordination, and communication skills associated with their mission to find, fix, track, target, engage, and assess dynamic targets.

## SBIR Technology

MAK Technologies developed QuickStrike – a realistic, deployable simulation environment that can be used to support more effective individual skill and team process training. QuickStrike can represent the full range of friendly, enemy, and neutral land, maritime and air objects. The built-in event editor provides the capability to incorporate scenario events, or “inject” into a training exercise to provide various inputs not typically portrayed by a simulation that impact military staff decisions. The training system supports individual student training and more dynamic multi-player team training events.

QuickStrike has the following features:

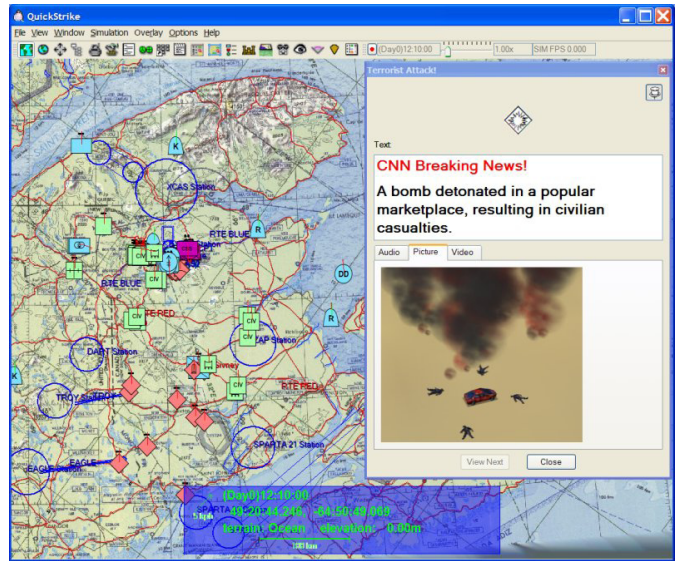
- A realistic simulated environment for practicing key processes and decision making
- Simple scenario development
- Easy to use graphical user interface (GUI)
- Built-in event development capability (MSEL builder)
- Individual or multi-player support
- Operates on a single computer, local area network (LAN), or over the Internet
- High Level Architecture (HLA) compliance enables integration with larger exercises such as those supported by the Joint National Training Capability (JNTC)

Throughout the project development, MAK presented prototypes of QuickStrike to various user groups within the Air Force and Air National Guard. One of the user groups was an ASOC that used QuickStrike to prepare for deployment abroad (simulating troops in contact and to drive close air support processes in the ASOC).

## Transition Impact

MAK entered into a contract with the Air Force Research Laboratory to further develop and field a simulation supported training capability at six ASOC squadrons. This training system will give each squadron the capability to do mission qualification training, continuation training, and

mission rehearsal whenever they have the personnel and time available.



QuickStrike screenshot

The institutional adoption of QuickStrike for ASOC training represents a major shift away from heavyweight wargaming systems that require large staffs to execute expensive and infrequent exercises towards a lightweight, user-driven, deployable system based on commercial-off-the-shelf products that can be run anytime, anywhere, by end-users. The end result is more frequent, higher quality training for less money.

## Company Impact

In addition to the Phase III contract order from the Air Force, MAK was awarded a contract by the United Kingdom Ministry of Defence Air Command and Control System Integrated Project Team (IPT) to further develop and field a simulation supported training capability, built on the company's QuickStrike version of its Battle Command tactical desktop simulation.

MAK develops software to link, simulate and visualize the virtual world. MAK creates tools and toolkits for distributed simulations, develops PC-based military tactical and operational trainers, crafts custom solutions, and researches and develops the latest simulation technologies.



# SBIR/STTR

Air Force SBIR Program  
AFRL/XP  
1864 4th Street  
Wright-Patterson AFB OH 45433

AF SBIR/STTR Program Manager: Augustine Vu  
AF CPP Program Manager: Richard Flake  
Website: [www.sbirsttrmall.com](http://www.sbirsttrmall.com)  
Comm: (800) 222-0336  
Fax: (937) 255-2219  
e-mail: [afrl.xppn.dl.sbir.hq@wpafb.af.mil](mailto:afrl.xppn.dl.sbir.hq@wpafb.af.mil)

