

Military

# MIGHT

By Russ J. Stacey

SOPHISTICATED GRAPHICS AND ANIMATION BORROWED FROM THE ENTERTAINMENT WORLD ARE DRIVING MILITARY TRAINING TO NEW LEVELS OF REALITY.



Instructing recruits how to disassemble and reassemble their rifle. Training fighter pilots how to react after a crash. Planning an accurate and effective response after an enemy attack.



Digimation created a 3-D plane for a real-time air refueling (BOWST) simulator.

PHOTO COURTESY OF DIGIMATION

OpenFlight format library offers 20,000 real-time models of vehicles, machinery, and human anatomy.

“Interestingly enough, what the military wants and what games and entertainment people want is pretty much the same thing: very accurate, realistic representations of a car, a plane, a helicopter, a part, whatever,” says Digimation President David Avgikos.

Anticipating interactive training as the future already here, the company’s current projects include a CH-47 Chinook helicopter maintenance trainer for the Army and electronic courseware to train pilots and maintenance personnel for the Joint Strike Fighter Program.

“You can either spend your time flipping through a two-inch-thick manual to get your answers, or you can go through this interesting and fun interactive training to get the same results,” he says.

“But the military has been a bit behind the cutting edge in terms of graphics and simulation. Games and movies have really pushed the boundaries of that realism, and people are using the technologies developed and pioneered by gaming companies to teach the military how to disarm a mine or field-strip a weapon or heal a wound.

These and other military training and simulation scenarios are accomplished in more realistic, controlled environments than ever before, thanks to Department of Defense simulation and training command proximity to the world-class entertainment, film production and video game companies located in Central Florida. This truly is the place where sophisticated tech-

nologies collide, and everyone benefits as a result ... especially war fighters.

## GAMING MEETS DEFENSE

With its full 3-D modeling and animation services, Lake Mary-based Digimation designs digital content for defense contractors and other companies. Their



SAIC Orlando, the local division of the San Diego-based company, provides medical simulation training to the defense industry.

We're going to see more realism as the game side of things creeps over to the defense side of things."

## EDUCATIONAL OPPORTUNITIES

Located at the UCF Center for Emerging Media, 360Ed is a media company providing interactive content to the education and training industries. Though the company doesn't have any current contracts with the military, that may soon change thanks to the increasing convergence between the gaming and defense worlds. Take "Burn Center," for example.

360Ed's medically accurate, interactive, first-response video game is used to train doctors, nurses, EMTs and other personnel how to treat burn and blast victims after a massive disaster. The simulation begins with a terrorist attack at a theme park. Marketed to hospitals, medical schools and the like, President and CEO Ben Noel envisions future possibilities for the game.

"This game would definitely fit for the military. We just haven't pursued some of those arenas as much. We're in education, but if somebody wanted us to change it from a theme park to, say, a C-130 airplane setup, we could do that."

Noel also sees the wheels of progress turning in the government sector's increased willingness to adopt advanced graphics and animation.

"Simulation and animation in the military and government sectors are really

starting to become a place where you can afford to put high production values because the volumes are there now."

## PREPARING FOR THE WORST

One company that already provides medical simulation training to the defense industry is SAIC Orlando. The local division of the San Diego-based company is a major vendor to the Army, supplying live, virtual and constructive simulation and training systems.

Major programs include the Common Driver Trainer (CDT), a virtual simulator for military vehicles, and One

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Semi-Automated Force (OneSAF), a program for virtual and constructive battlefield simulations.

According to SAIC Orlando Senior Vice President and General Manager Beverly Seay, a concept her company has developed called "composability" affords wide flexibility with architectural platforms. By adding components or models, SAIC engineers can compose a system to work in different environments for different customers.

"Integrating software and hardware with the CDT, for example, you take common parts that you'd find in many simulators. All we do is reuse everything that can be reused and maybe

PHOTOS COURTESY OF SAIC (2)



Beverly Seay

change out the dashboard to switch scenes or anything that looks or feels different from vehicle to vehicle," she says.

On the medical simulation side, SAIC Orlando, employing about 500 in its Central Florida Research Park headquarters, has developed such products as a human patient simulator and a

mass-casualty medical training and evaluation system. By applying those same composability principles, they're able to push the technological envelope even further.

"We can take a vehicle platform like the CDT and create a medical evacuation simulation," explains Division Manager/Program Manager Brian Levine. "Or we can take constructive simulation and build on the algorithms to achieve a more advanced model for wound aging."

As innovation continues to thrive in MS&T, one thing is almost certain: Orlando will retain its position at the forefront of the industry. 