

A New Vision, Further Leveraging Emerge From Orlando's Simulation Superstructure

WTET Prototype Developed By Collaboration, Partnerships, Cooperation Between Government and Industry

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Defense capabilities in education and training represent an important resource. New programs will accelerate transfer of this experience to civilian institutions. The Department of Defense and NASA [National Aeronautics and Space Administration] have invested heavily, both in the hardware and software needed for advanced instructional systems; they have accumulated valuable experience in how to use the new technologies in practical teaching situations. The Navy Training Systems Center [now the Naval Air Warfare Center Training Systems Division] and the Army Simulation, Training, and Instrumentation Command together spend about \$1 billion a year on training systems. There are over 150 defense simulation and training companies serving these needs in Central Florida alone....”¹

—President William J. Clinton
Vice President Albert Gore, Jr.
February 22, 1993

From the nationally recognized simulation superstructure in Orlando comes a new vision — and further leveraging.

The acquisition manager of today must be aware of alternative vehicles, available outside of the Federal Acqui-

sition Regulations, which can be used to ensure a technologically superior product, produced in a cost-effective manner by a reliable industrial source.

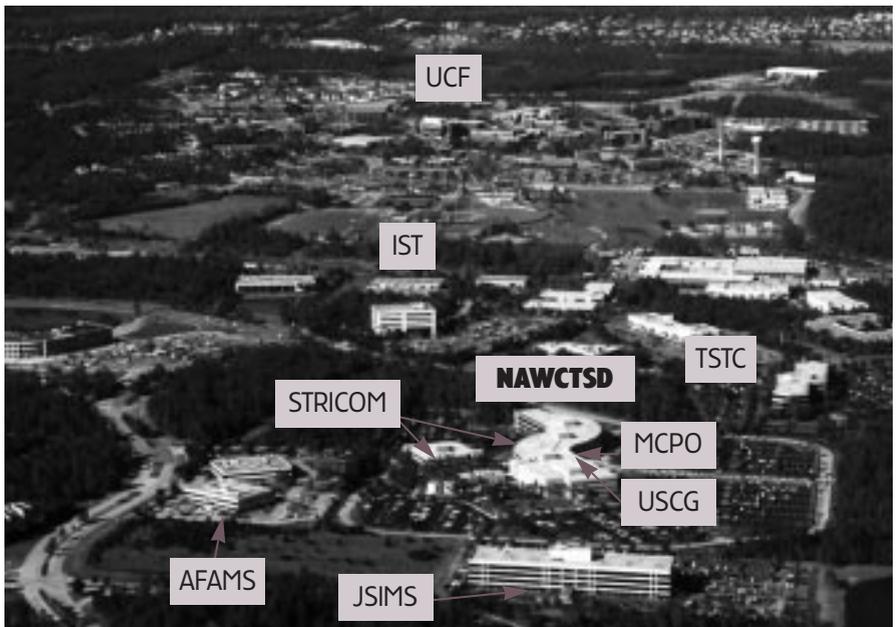
Weapons Team Engagement Trainer

An example of one such vehicle is the cooperative agreement among the Naval Air Warfare Center Training Systems Division (NAWCTSD); SBS Technologies, Inc.; and Camber Corporation, to produce the Weapons Team Engagement Trainer (WTET). The

Office of the Secretary of Defense, under the Defense Laboratory Partnership Program for Technology Transfer, funds the agreement.

The WTET is an advanced Special Weapons and Tactics (SWAT) training system that allows multiple member weapon teams to participate in multiple room (and multiple screen) threat engagements, under shootback and advanced individual and team performance feedback conditions. NAWCTSD initially developed the system.

FLORIDA CENTER OF EXCELLENCE FOR SIMULATION



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A prototype of the WTET was extensively and successfully demonstrated to law enforcement agencies and special operations groups of the U.S. military. The enhanced production version will be demonstrated in 1997. It will provide instructor-controlled training and feedback for a wide range of law enforcement and military threat situations. Included in the system will be the training capability for use of force decision making; marksmanship skills and analysis; SWAT operations, including sniper training; and use of less-than-lethal-force weapons.

Industry and the Commercialization Process

The industry partner, SBS Technologies, Inc., already produces a judgmental use-of-force trainer, for both the law enforcement and military communities. Under the commercialization of WTET, the merging of their current trainer and the many unique features of WTET will result in a training system that will provide a full and complete range of weapons, team, and engagement training under realistic tactical situations.

This is the first use of a cooperative agreement for commercialization within the Naval Air Systems Command, NAWCTSD's parent organization. As such, WTET has been designated as a pilot project.

Authority to use the legal vehicle selected for this commercialization process – the cooperative agreement – was recently granted to the military services.

The commercialization process consists of a two-year cycle of system development by NAWCTSD and its industry partners, along with the direct involvement of the user community. Traditional programmatic reviews are ensured during the life of this non-traditional technology transfer project. The program management, engineering oversight, and training requirement functions during the commercialization are being performed by NAWCTSD.

User Community

Interested user agencies also will be integrated into the effort to ensure the final product reflects the requirements of the military and civilian law enforcement communities (federal, state, and local). As part of the program plan, two systems will be available for evaluation by those communities.

Sponsored in part by the National Institute of Justice, the initial system installation has been designated for the Los Angeles County Sheriff's Department Laser Village Training Facility. Ideally, it should be operational by the end of 1997, and will be available for use by military and law enforcement agencies in and around Los Angeles.

Commenting on the system, Lt. Mike Grossman, manager of the Force Training/Laser Village Training Facility in Los Angeles, says, "It doesn't get any better. It's really a great opportunity to be able to participate in a program where so many different agencies are working to make this happen, and be able to provide state-of-the-art training for Southern California – for military, federal, state, and local law enforcement. I think the sharing of knowledge and expertise, and the joint venture doesn't get any better. We appreciate the opportunity to be the host for this kind of operation."

A second system will be available for demonstration at relevant trade shows and for possible temporary installations at select user agencies.

Product Concept Evolves

Cost reduction is not the only advantage of this dual-use effort. Since the cooperative agreement between the Navy and its industry partner was signed in February, 1996, the concept of the product has evolved.

The concept for the commercially produced system now incorporates marksmanship, use-of-force decision making, special weapons and tactics, and advanced military weapon team

training into a user-friendly, easily upgraded modular system design.²

Other Opportunities

Other opportunities exist for collaboration between the Department of Defense and the entertainment industry. Mechanisms are available that encourage the government's collaboration with industry to conduct joint research and development (R&D). Under this framework, the government gains the right to use the research results for government purposes; the company holds all commercial rights. Both partners share the costs of conducting the research.

Products such as games and location-based entertainment, as well as the underlying technology used to create entertainment products are targets of opportunity.

Why would the Navy consider partners with such widely diverse motivations and objectives? Both actively draw from modeling and simulation technologies, to produce products.

The Navy uses commercial games in training programs, on a limited basis. The games are used as a "backdrop" to stimulate behavior – such as coordination and communication between pilots and crew.

Consider the sailor or student of today. Many have hands-on experience – and expertise – with PC-based learning. The Navy has found that computer-based games provide an effective, low-cost way to simulate flying and other task experiences. The applications must be appropriate – those that do not require expensive hardware/software to create highly accurate, real-time situations.

The joint R&D does not have to result in a product. It can be directed at the underlying technology. The agreements that promote this collaboration are not covered by the Federal Acquisition Regulations, which apply to government contracts. They can also be exempted from the Freedom of Infor-

mation Act. To attract these commercial partners, the government recognizes that intellectual property must be protected.

Market Dynamics

These types of agreements help move the technology out of the laboratory and into the marketplace. The technology becomes available to civilian users, allowing the military to buy resultant commercial off-the-shelf products.

Invaluable benefits from these market dynamics emerge, as a broader customer base lowers the per-unit cost. The military is getting the commercial price to acquire a system, not "cost-plus." Civilian users gain the benefits of more advanced technology (typically, in the area of learning technology, where the Department of Defense has the lead). We will see more of this technology moving into workforce development and K-12 education.

The rapid pace of change to Department of Defense acquisition policy means that an activity's internal acquisition policy and procedure directives require continuous updating. As a result, NAWCTSD developed the *NAWCTSD Acquisition Guide*, an electronic acquisition guide, considered to be a faster method of communicating new policy to NAWCTSD's own acquisition managers.³ First introduced in March via the NAWCTSD Website, the guide includes an Acquisition Roadmap, which is a tailored representation of the Department of Defense acquisition process, as revised.

ENDNOTES

1. Clinton, President William J., and Vice President Albert Gore, Jr., "Technology for America's Economic Growth, A New Direction to Building Economic Strength" (The White House, Feb. 22, 1993, p. 14).
2. For more on WTET, visit <http://www.ntsc.navy.mil/wtet/wtet.htm> at NAWCTSD's Website.
3. To view or access the *NAWCTSD Acquisition Guide*, visit <http://www.ntsc.navy.mil/acqguide/acqguide.htm> at NAWCTSD's Website.

COST ANALYSIS STRATEGY ASSESSMENT MODEL (CASA) COMES OF AGE

Lt. Col. Carl Gardner, U.S. Army

The CASA model, profiled in the January-February 1996 edition of *Program Manager* magazine,¹ recently underwent a major overhaul. CASA is actually a set of analysis tools formulated into one functioning unit. It collects, manipulates, and presents as much of the cost of ownership as the user desires. As depicted in the table, CASA's configuration includes a number of programs and models that allow you to generate data files, perform Life Cycle Costing (LCC), sensitivity analysis, LCC risk analysis, LCC comparisons, and summations.²

Version 4.0 brings the ease of Windows™ to its users and allows export of data in spreadsheet format. The new logical input sequence (in work breakdown structure format) allows easy data entry. The flexibility to perform "What if" drills is increased by the addition of the capability to vary the levels of maintenance (1-10) and a readiness target. An online tutorial provides initial training and assistance during use. CASA can be downloaded from the following website, via the Defense Systems Management College's Home Page:

<http://dsmc.dsm.mil/specfeat/htm>

According to Keith McLendon, U.S. Army Logistics Support Activity, CASA Version 4.0 information may also be downloaded from the following website, via the U.S. Army Logistics Support Activity's Home Page:

<http://www.logpars.army.mil/CASA.htm>

REFERENCES

1. Manary Joel M., "DSMC's CASA Model Still Going Strong," *Program Manager Magazine*, January-February 1996.
2. *CASA Users Manual*, Defense Systems Management College, February 1994.

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CASA CAPABILITIES

Life Cycle Cost Estimating	Trade-Off Analyses	Repair-Level Analyses	Production Rate and Quantity Analyses
Warranty Analyses	Spares Provisioning	Resource Projections (e.g., Manpower, Support Equipment)	Risk and Uncertainty Analyses
Cost Driver Sensitivity Analysis	Reliability Growth Analyses	Operational Availability	Analyses with Automated Sensitivity Analysis
Spares Optimization To Achieve Readiness Requirements	Operation and Support Costs	Contribution by Individual Components of The System	