

National Simulation Superstructure

Disney Doesn't Have a Monopoly on the World of "Make Believe"

KATHLEEN M. CLAYTON

The imagination, creativity, and technically sophisticated world of "make believe" for which this city is famous does not begin and end with the creations of Walt Disney. The Department of Defense (DoD) is the fortunate beneficiary of a concentration of modeling and simulation (M&S) expertise – a national simulation superstructure, also located in Orlando. This collection of collocated defense agencies, proven M&S companies, academic institutions with M&S curriculum, and state and local governments is committed to the enhancement and use of this leveraging tool as a vital national resource.

Recognizing the advantages in leveraging this array of talent to provide the best possible products to the Army, the U.S. Army Simulation, Training, and

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Instrumentation Command (STRICOM) recently led the formalization of the concepts inherent in the success of this unique M&S community. Naming this simulation superstructure *Team Orlando*, STRICOM and six other key players (the Naval Air Warfare Center Training Systems Division [NAWCTSD], the Joint Simulation Systems Office [JSIMS], the Marine Corps Program Office, the Air Force Agency for Modeling and Simulation [AFAMS], the Institute for Simulation and Training [IST], and the Training and Simulation Technology Consortium [TSTC]) immediately signed on as Charter Members. The *Team Orlando* Charter outlines the synergy of the group as they recommit themselves to "work together to share information and leverage programs and technology in the best interest of the Department of Defense and the American taxpayer."

Origins

Dating from the 1950s two Services, the U.S. Army and the U.S. Navy, built and enjoyed a special relationship in the M&S community. The informal concepts behind this relationship are the basis of *Team Orlando*. The success of this formula provides a history of mutual benefits for both Services. Today STRICOM and the Naval Air Warfare Center Training Systems Division (NAWCTSD) benefit greatly from a matured inter-Service relationship affording each entity the full benefits of leveraged resources, manpower, and

IST/UCF DYNAMIC TERRAIN AREA OF VISUAL SYSTEMS LABORATORY.



Clayton is a Project Director at the U.S. Army Simulation, Training, and Instrumentation Command, Orlando, Florida. She holds a B.A. from Arizona State University and an M.A. from Georgia State University.

technological expertise, creating a strong foundation of success and the springboard for joint projects, such as JSIMS. The Marine Corps Program Office, another tenant of NAWCTSD, works as the principal representative for ground and air M&S programs impacting the U.S. Marine Corps. The U.S. Air Force, also seeing the benefit of leveraging the resources in the area, established the Air Force Agency for Modeling and Simulation (AFAMS) in Central Florida and plans to grow this organization in the next few years.

The State of Florida recognized this growing industry by establishing the Institute for Simulation and Training at The University of Central Florida (IST/UCF) in 1982. The IST provides a common source of academic studies and research in support of the M&S community.

In 1985, the Governor and Cabinet of the State of Florida issued a resolution recognizing the "Center of Excellence for Simulation." Today, Enterprise Florida, as the state's economic development unit, recognizes the significant contribution of STRICOM, NAWCTSD, the Marine Corps Program Office, and the growing AFAMS as the mainstays of the Center of Excellence.

In 1993, as further testament to the capability of this unique M&S community, the TSTC was established under the White House Technology Reinvestment Project. The TSTC was chartered to be a non-profit, one-stop source for all commercial applications of these sophisticated military and space M&S technologies.

Team Orlando in Action — DoD Membership

Over 1700 M&S professionals, representing the four primary uniformed services of the United States, comprise the government contingent of *Team Orlando*. The relationships and integration between and among these



dedicated professionals is where the benefits of leveraging begin. Cooperative efforts between these government professionals, industry, and academia work to realize the benefits for the warfighter and the taxpayer.

One of the best examples of the *Team Orlando* concepts in action is exemplified by the symbiotic relationship between STRICOM, NAWCTSD, and the Marine Corps Program Office. The organizations share facilities, with STRICOM and the Marine Corps Program Office as tenants. STRICOM and the Marine Corps Program Office buy various types of base operations/infrastructure support services, and work years of contracting and engineering talent from NAWCTSD. This arrangement benefits all three organizations by sharing expertise, techniques, and methodologies, further enhancing integration and synergy among the Services.

The growing U.S. Air Force presence in this national simulation superstructure promises an additional potential to develop systems that combine the best of the Services. The mission of AFAMS is to implement DoD, Joint, and Air Force M&S Policy/Standards and provide Service-level M&S support to Joint, Combined, and Air Force Activities. This office also supports Air Force and Joint Wargaming Exercises, and supports other major joint M&S

initiatives, such as the Joint Modeling and Simulation System (JMASS). Clearly, the synergy provided by *Team Orlando* will be vital as AFAMS, STRICOM, and NAWCTSD support and manage the development of joint synthetic battlespace and advanced distributed simulations of their respective Service customers.

Additionally, the JSIMS mission provides Commanders in Chief and the Services with next generation training, mission planning, and mission rehearsal capabilities. The JSIMS Joint Program Office values the benefits of the external joint community and the synergy created under *Team Orlando*.

The DoD members of *Team Orlando* also include representatives from Army Research Institute, Army Research Laboratory, Army National Guard, JSIMS Maritime, U.S. Naval Reserve, U.S. Marine Corps Reserve, Air Force Materiel Command Operating Location, and representatives from our NATO allies in Germany and the United Kingdom. Each of these organizations capitalize on the opportunity to use M&S solutions to their full advantage in fulfilling their individual missions.

Other Government Agency Membership.

In the spirit of *Team Orlando*, STRICOM and National Aeronautics and

Space Administration (NASA) recently signed an Interagency Agreement for Technology Cooperation. This agreement serves as a foundation for a more lasting technology transfer program and continuous business relationship. By cultivating this business relationship, STRICOM and NASA promote appropriate simulation and related technology for national Service, space, and other applications. Delineated in the agreement is the sharing of information, technologies, methodologies, consultation, and other services; and working toward further collaboration of efforts involving simulations, simulators, and instrumentation technology and methodologies. Also included are joint research or specific projects, whenever possible.

The Florida High-Technology Corridor Council and Enterprise Florida are working together with STRICOM, NAWCTSD, and approximately 150 companies involved in modeling, simulation, and training activities in Central Florida to provide for continued growth and recognition of the importance of this national asset. This national simulation superstructure, guided by the concepts of *Team Orlando*, is growing and attracting new simulation interests every year.

Academic Membership

Located adjacent to STRICOM and NAWCTSD, the University of Central

As a charter member of *Team Orlando*, UCF takes an aggressive interest in simulation and training. The first university in the nation offering a master's degree in simulation, UCF is currently developing a Ph.D. program.

Florida (UCF), Institute for Simulation and Training (IST) works to fulfill its mission as a resource and focal point for simulation and training technologies. The synergism generated through *Team Orlando* enables IST to play a key role in advancing the art of simulation and training technologies and the transfer of those technologies to the civilian sector. These efforts enhance our society and get the most return from research dollars.

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Industry Players

DoD *Team Orlando* members have significant involvement with many of the 150 commercial industry partners located here in Central Florida. Many serve as a contractor or subcontractor on crucial DoD programs, supporting \$1 billion in contracts annually. As we partner with local industry, *Team Orlando* DoD members benefit from the unique opportunity to take advantage not only of federal Acquisition Reform initiatives, but also reap the rewards provided by the synergy created by this simulation superstructure.

Many other industry players are embarking with *Team Orlando* on a journey toward dual-use exploration. For example, STRICOM and the Walt Disney Company, the premier expert on the use of M&S in the entertainment industry, have an ongoing relationship exploring dual use and technology transfer opportunities.

The mission of TSTC is to assist private/commercial industry to acquire simulation and training technologies and capabilities previously available only to the U.S. military and space effort. TSTC membership includes

IST/UCF VIRTUAL ENVIRONMENT TESTBED.



STRICOM, NAWCTSD, AFAMS, NASA, IST, and over 20 private companies. One project under exploration by the TSTC is a regional transportation planning system, for which the technology is applicable to the national defense and its readiness, as well as federal, state, regional, and local transportation planners. TSTC is also exploring other simulation and training projects with the American Red Cross, Universal Studios, Kennedy Space Center, and the Federal Emergency Management Agency (FEMA).

The work of TSTC – to raise awareness and facilitate technology transfer and jobs – clearly make it an asset to *Team Orlando* by sustaining the defense industrial base upon which the Department of Defense must rely for affordable, state-of-the-art M&S technology development and applications.

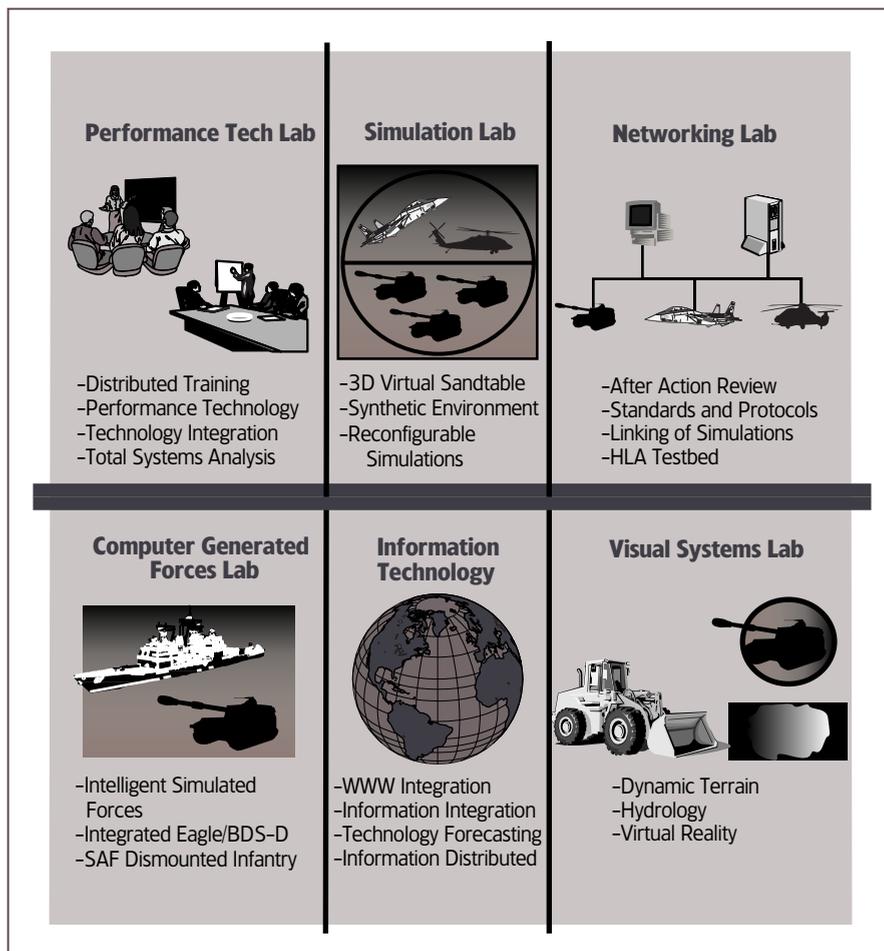
Recognized Results

As a member of this national simulation superstructure – *Team Orlando* – success is multiplied among all the members. This national simulation superstructure provides DoD with an enormous, technologically advanced support unit. Our contractors provide us with better products through retention of highly skilled jobs, advancements in the M&S industry, and academic support for the technical educational needs required by the simulation industry.

The value of this national simulation superstructure, led by *Team Orlando*, can be seen daily in many areas:

- Growing Number of High-Technology Jobs
- Reduced Cost for DoD End Items
- Shorter Time from Technology Development to End User Applications
- Number of Strong Bidders for DoD Contracts
- Number of Cooperative Research and Development Agreements (CRADA)
- Grants And Cooperative Agreements Integrating Collaboration in Research and Development

THE INSTITUTE FOR SIMULATION AND TRAINING AT THE UNIVERSITY OF CENTRAL FLORIDA (IST/UCF) PROVIDES A COMMON SOURCE OF ACADEMIC STUDIES AND CONDUCTS RESEARCH IN SEVERAL DOMAINS FOR THE DoD MODELING AND SIMULATION WORKFORCE.



Team Orlando members plan to continue to expand these contacts and agreements, leveraging and enhancing the innovations being developed by and between the growing membership of the team for the overall long-term benefit of all.

This growing force of government, industry, and academia M&S experts share a common vision for the future of M&S and its recognized development. The continued success of *Team Orlando* is vital to the shared goal of cost reduction by leveraging of DoD M&S dollars. By working to preserve and advance the industrial base, increase the willingness of industry to invest their R&D efforts in M&S, foster innovative applications of the latest technology, and lev-

erage the numerous M&S projects in other areas, the Department of Defense, through the efforts of *Team Orlando*, can maintain its technological superiority at a reduced cost into the future.

The *Team Orlando* model is a success story. If fostered, it will assure the nation a network of highly qualified companies ready and able to develop superior M&S technologies and products for the Department of Defense. As written in the STRICOM crest, "All But War Is Simulation." These state-of-the-art, "make believe" M&S solutions will provide the warfighters of tomorrow, operating under the concepts of *Joint Vision 2010*, with capabilities to ensure the success of U.S. Forces into the next millennium.