TRAINING ACADEMY

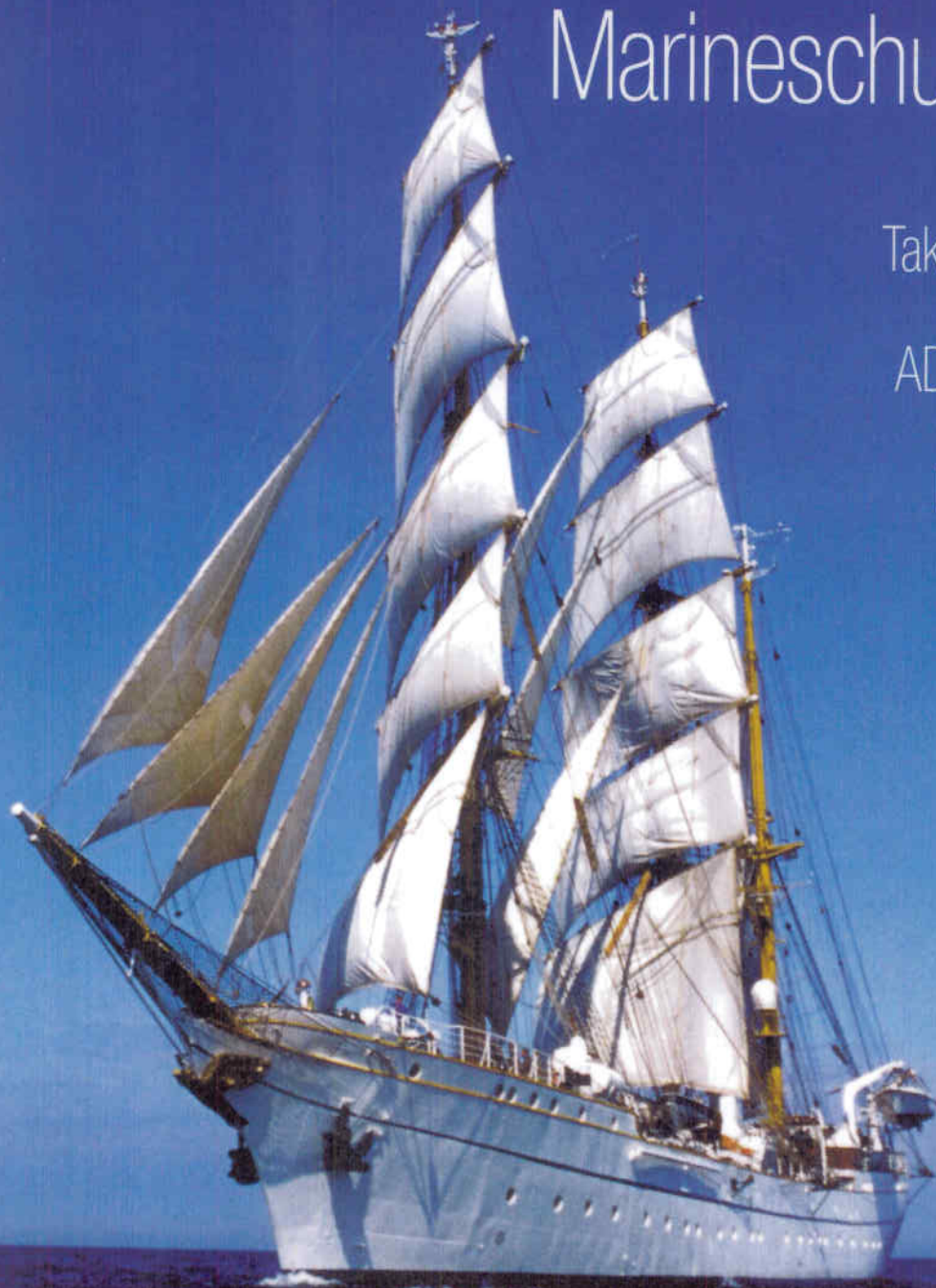# Marineschule Mürwick

TRAINING TECHNOLOGY

Taking MOUT Up a Level

CONFERENCE REPORT

ADL at the Tipping Point

PROCUREMENT

New Business Models

From Theory
to Practice

ADL has become a primary DoD training delivery tool and the services are going to share. These were the main points of focus for the 2006 JADL Implementation Fest. Chuck Weirauch describes the proceedings.

After more than seven years of **planning,** research and development, the US Advanced Distributed Learning (ADL) Initiative has reached the "tipping point" where it can move from those formulative stages to implementation across the US military – welcome news to the diverse body of military, industry and academic ADL supporters meeting in the Orlando 2006 Joint ADL Co-Laboratory (JADL) Implementation Fest 22-24 August. More than 350 participants attended the event, organized and sponsored by the JADL with the cooperation of the National Training Systems Association (NTSA).

The driving force behind the ADL implementation is DoD Instruction 1322.26 entitled "The Development, Management, and Delivery of Distributed Learning" signed June 16, 2006. Under this directive, it is DoD policy that "Embedded training and distributed learning shall be considered as the first option to meet training requirements of defense technology projects and acquisition programs."

The Impact

What that means is that from now on, when a training program for any US military weapons

Above

Dan Gardner, Director of Rediness and Training Policy and Programs for the US DoD addresses the 2006 ADL Implementation Fest audience.

Image credit: C Weirauch

system, support equipment or other hardware or software is being developed, top consideration must be made to the use of embedded or ADL training technology. Such a precedent setting requirement for embedded training had been made for the US Army's Future Combat System (FCS), but the directive was the first such for ADL-based training and learning. For ADL, which has long been considered as a key enabler for the US military's Training Transformation (T2) during its development, the time has come for the DoD to exploit its potential.

"Training Transformation is no longer a theory," Dr. Paul Mayberry, Deputy Under Secretary of Defense for Readiness, told the Implementation Fest participants. "We are successfully conducting distributed learning in live, virtual and constructive environments. Our successful T2 business model can be expanded upon through the progress of advanced distributed learning."

Dan Gardner, Director of Readiness and Training Policy and Programs for the Office of the Secretary of Defense, said that the DoD Instruction 1322.26 is the tipping point where ADL goes from the planning stages to providing training the way the US military operates. He also said that ADL will help provide joint readiness training "better and faster," and that the key to the success of ADL has been the business model for the US military's Training Transformation.

"This instruction has been a long time in coming," said Dr. Robert Wisher, Director of the ADL Initiative, which was initiated and is administered by the Office of the Secretary of Defense. "The services knew that this requirement was coming, and this year we feel that we are in position to go ahead with this instruction."

Shared Resources – SCORM, CORDRA & ADL-R

Another key policy element of DoD Instruction 1322.26 is that "The DoD Components shall share training resources to the maximum extent possible. A joint architecture and common standards for training technology shall be developed." Just how ADL is becoming a primary DoD training tool and how the standards, joint architecture and learning content are being developed and shared between the services were the main points of focus for the 2006 Implementation Fest proceedings.

One of the major factors for the success of the ADL Initiative has been the widespread-adoption of the Shareable Content Object Reference Model (SCORM) to the point where this distributed learning content standard is having a global impact. Because of this world-

wide acceptance, the DoD would like to "spin out" long-term stewardship of SCORM to an international organization. Wisher cited Korea as the largest single user of SCORM in its educational system, while several other Asian, European and Latin American countries, along with Australia and Canada, are using the distributed learning content model in both their online military and civil education systems. "The use of SCORM outside the DoD is just astonishing," Wisher emphasized.

With all of the US military services within the DoD, along with the US Joint Forces Command, now having the distributed learning infrastructure established that will allow compliance with the first element of DoD Instruction 1322.26, the ADL Initiative has also established mechanisms to comply with the second part of the directive, sharing content. The framework for such data sharing within DoD and potentially throughout the globe is the Content Object Repository and Registration Architecture (CORDRA).

This open-source software framework is designed as the model that will allow distributed learning networks and content repositories to interoperate so that distributed learning content can be shared. Like SCORM, the CORDRA model is being rapidly accepted and adopted throughout the world. Also like SCORM, the ADL Initiative would like to have an international organization become the primary owner of CORDRA.

The next step to online DoD learning content sharing is the ADL Registry (ADL-R), the first ADL Initiative effort to make use of the CORDRA structure. The ADL-R Project began August 15, 2006. Paul Jesukiewicz, the new ADL Initiative

Deputy Director who has just replaced Dr. Mike Freeman, provided a short overview of the purpose of the ADL-R and how it will function via the CORDRA structure.

It is now a DoD requirement that all learning content in service and DoD repositories be registered in the ADL-R with a metadata tag to indicate its title, location and availability. In an earlier interview, Freeman described how trainers and educators could conduct a Google-like search for the metadata tag that would indicate if distributed learning content existed on a certain topic and if so, where it was stored. Being able to store data and make it available for reuse is one of the key, cost-saving imperatives for the ADL concept

"The question is how do you discover training and other related data and content across the entire ADL enterprise," Jesukiewicz said. "We also want to make this data universally available."

Jesukiewicz also reported that the third edition of SCORM 2004, which was released in February 2006, is the final version of the model since it provides the desired amount of stabilization. The final draft release of this version was scheduled for September of this year.

The Near Future

Just how important are these developments to

the DoD and the military services? To provide a better understanding of just how important they are, Joe Camacho, Program Manager for the Joint Knowledge Development and Distribution Capability (JKDDC) provided ADL Fest participants with a near-future vision of how such a system would help his organization.

Camacho said that the JKDDC will stand up its Knowledge Online Portal in October of this year. He expects that the portal will be the conduit for all joint training courseware and other distributed learning data for the US Joint Forces Command. The JKDDC portal will be linked to the ADL-R Registry, as eventually will all the online Knowledge Portals of the other DoD organizations and the US military services.

"We are looking in the future to move from a learning management system with courseware on it to a multi-functional knowledge portal," Camacho explained. "This portal will bring to joint warfighters everything they need to do their jobs anytime, anywhere." – which raises the issue of technical manuals.

ADL and Tech Manuals

Another new ADL Initiative effort is to make learning objects such as technical data, simulations and illustrations created for use in electronic technical manuals to also be accessed and shared by the ADL learning community for use in online courseware applications. The same standard could also be used to incorporate games as learning objects into courseware as well.

To create a framework for cooperation to develop and distribute such learning and technical data in an integrated approach, The ADL Initiative organization has signed a Memorandum of Understanding (MOU) with the Aerospace and Defense Industries Association of Europe (ASD) Technical Publication Specification Maintenance Group (TPSMG) that manages the International Specification for Technical Publication S1000D. The MOU calls for the two organizations to work together to recommend how S1000D electronic data can interact with the ADL learning community though the use of SCORM.

Tim Tate, Director of the ADL Job Performance Technology Center in Alexandria, Virginia told the ADL Implementation Fest participants that the partnership would provide a means to bring the S1000D specification and SCORM model together "in a way that makes sense" through the S1000D and SCORM Test Bed project. He pointed out that in addition to the multinational involvement in this project, the US services have pledged their support for it in applications for the Global Hawk program for the US Air Force; the Future Combat System

for the US Army; the F/A-18 program for the US Navy; and the M-16A rifle for the US Coast Guard. The first delivery of the shared electronic technical manual/ADL courseware material will be for the US Navy's Littoral Combat Ship (LCS).

"Right now an electronic technical manual can only be delivered as a single document," Tate said. "The goal is to break up this data into smaller usable pieces of information for reuse through a common source database."

ADL Implementation Status

In addition to the updates on the progress of the ADL Initiative, representatives of the US military services provided overviews of recent developments in the implementation and expansion of their respective ADL programs. Leading off was Vice Admiral Kevin Moran, Commander of the Naval Education and Training Command (NETC). He described how the Navy's key ADL component, its Integrated Learning Environment (ILE), can provide Naval personnel with the skills they need to perform their jobs.

Moran also cited how distributed training has provided major savings though the reduction of the amount of training time required for certain tasks. ADL will also help the Navy meet its challenge of providing the higher levels of training sailors will need to serve aboard "optimally crewed" ships such as the new Littoral Combat Ship (LCS), he pointed out.

"We are moving towards a competency-

based force," Moran said. "If we do this right, it will change the Navy so much that you won't recognize it."

Colonel James Markley, Director of the Training Development and Delivery Directorate of the Army's Training and Doctrine Command (TRADOC) provided an update on the agency's Classroom XXI program, a program to modernize Army classrooms with an advanced distributed multimedia architecture that will deliver the latest distance learning curricula to Army officers and soldiers. He also described the Deployed Digital Training Campus, designed to provide distributed learning in theater and now in operation in Iraq.

According to Colonel Thomas Giattino, Chief of the Learning Systems Integration Division of the Air Force's Air Education and Training Command, that service's Knowledge Portal now has more than 500,000 users. The portal is the conduit for the Air Force to provide distributed training to meet the challenges of network-centric warfare, Giattino said.

Colonel Terence Kerrigan, Director of the Marine Corps online College of Continuing Education that is accessible though the service's MarineNet Knowledge Portal said that the ADL-based network has been providing a deployable learning system for Marines in theater. Commander Jay Allen, e-Learning Program Manager for the US Coast Guard, described how his service is working to help develop distributed learning for the Department of Homeland Security (DHS).

M&S

Wednesday keynote speaker Keith Seaman, the Senior Advisor for Command and Control Modeling and Simulation for the Secretary of the Air Force, gave ADL Fest participants an insight as to the importance of M&S to Air Force and DoD training. As a general goal he stated the Air Force needs to look at how to shift more "live fly" to "virtual fly" as a means to deal with the impending cutback of more than 40,000 airmen from the service while still maintaining readiness. And, as to how to take advantage of M&S, he stated:

"There are a lot of opportunities for M&S in military training, but we need a cooperative enterprise to make them work. That's because we can't afford to duplicate systems anymore." **MST**

Check out the 2006 JADL Implementation Fest presentations and activities at www.jointadlcolab.org. Find more information and news about the ADL Initiative at http://www.adlnet.gov