
Information for the Defense modeling and simulation community

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1. DIRECTOR'S COMMENTS

I'm reminded of the old adage that "time flies when you're having fun," for these past 45 months of leading DMSO have gone by incredibly fast. In His providence, God blessed me with the opportunity to do important work with a superb team of professionals, and it has been delightful. I am now rapidly approaching the point where I will get to turn over the reins of DMSO, hang up my Navy uniform, and move on to other endeavors. I do so joyfully and with deep satisfaction, for this has been a time of tremendous progress across the M&S arena and I am proud to have been part of such a grand enterprise.

You will note signs of this progress everywhere. The pages of this newsletter report some of it, but you will more palpably sense it in the conversations of the folks around you during a SIW, in a program office, at an ITEC, or out amongst the daily users of M&S across the training, analysis and acquisition domains. The M&S community is working together to make the use of modeling and simulation more powerful and cost-effective than ever before. By adoption of the High Level Architecture and a growing set of data interchange standards, we are fostering the broad interoperability and reuse that are essential to robust capability and

improved cost-effectiveness. Impressive supporting software tools are emerging. Going beyond mastering the plumbing, we are properly putting increased emphasis on the guts of the modeling task - building valid representations of people, systems and the natural environment that are suitable to the task at hand. We are sharing information to an unprecedented degree, identifying reusable resources, relying on one another for deliverables, and continually educating ourselves to optimize our efficiency and effectiveness. Because of our combined efforts, simulations will be built better, faster and cheaper. In this, we are revolutionizing the way the Department of Defense, and every other M&S user around the globe, does business.

Observers quite reasonably focus on the simulation applications or the technology itself, but the underlying, most important part of this venture is the people involved. The M&S community is fortunate to have many talented, dedicated folks who pour themselves into their work and persevere, day after day, to accomplish a larger good. I wish there were a way to personally thank each of you for your help with my tasks and for your contributions to the M&S community as a whole. I started to try to list everyone, beginning with my great team at DMSO and then widening out to all the folks in government, industry and academia, across the U.S. and around the globe. It proved an impractical task, yielding a list too long for these pages, yet never complete.

I will instead just offer here my deepest thanks to each of you who have touched my life over these past several years. You identified the key issues, developed the bright ideas, pointed us in the right direction, criticized me when I (far too often) deserved it, offered advice and encouragement, prayed with or for me, and worked tirelessly to turn vision and promises into reality. I am indebted to each of you.

Assuming the DMSO helm from me will be our current Deputy Director, Air Force Colonel Ken "Crash" Konwin. Most of you may already know Crash from the great work he's done at DMSO since joining us last summer, from his previous job as M&S lead for the Joint Strike Fighter, or from his earlier accomplishments elsewhere in the DoD analysis/simulation community. Dr. Judith Dahmann will continue her outstanding work as DMSO's Chief Scientist, Gary Yerace will continue to ably lead the DMSO staff, and we expect Navy Captain Stan "Steamer" O'Connor, an F-14 pilot currently a student at the Industrial College of the Armed Forces, to report aboard in June as our new Deputy Director. LTC Harry Thompson, Major Steve Zeswitz, Waverly Debraux, Simone Youngblood, Ruth Willis, Paul Foley, Jack Sheehan, Mike Hopkins, the M&S Executive Agents, and a too-long-to-name-them-all band of talented project managers and supporting staff will likewise persist in their dedicated service. With Crash in the lead and the rest of this superb crew flying formation, DMSO will be in great hands!

In closing, let me again express my gratitude for the chance to play on a remarkable team. Dr. Anita Jones used to exhort us to "Make a difference on your watch!" I know we have. May God bless us all with fair winds and following seas on the exciting course that lies ahead.

2. WORK PROGRESSING ON NATO M&S MASTER PLAN

The North Atlantic Treaty Organization (NATO) expects to complete its

Modeling and Simulation Master Plan (MSMP) by Fall 1998.

The NATO MSMP is the product of the Steering Group on Modeling and Simulation (SGMS), or, as it is formally titled, the Steering Group on NATO Simulation Policy and Applications. Version 0.3 of the MSMP will be presented for review and approval at the group's next meeting in May.

"A vigorous, cooperative effort by the Steering Group is yielding what we believe is an excellent Master Plan and a sound policy recommendation," said Capt. James Hollenbach, Director of the U.S. Defense Modeling and Simulation Office (DMSO) and Chairman of the SGMS.

The MSMP lays out the goals, objectives and actions that must be taken to reach NATO's M&S goals. The SGMS is also drafting an M&S policy document that assigns oval responsibilities and provides the means for executing the MSMP.

"The SGMS is optimistic that achieving agreement on the NATO M&S Master Plan will greatly help NATO to achieve its M&S goals," Hollenbach said.

The five NATO MSMP objectives and highlights of subjects they discuss are:

- Objective I -- Establish a Common Technical Framework -- foster interoperability and reuse via the HLA and data interchange standards
- Objective II -- Provide Common Services -- education, library for reusable resources, help desk
- Objective III -- Develop Simulations
 - emphasize cooperative efforts, reuse, federations (early pathfinder)
 - allocate seed money to foster cooperative, high-priority projects
 - share raw materials (knowledge), conduct proper validation
- Objective IV -- Employ Simulations -- planning, resources, database preparation, execution, impact assessment
- Objective V -- Incorporate Technological Advances -- monitor and conduct technology development, share information, implement

Created by the NATO Conference of National Armaments Directors (CNAD) in Nov. 1996 and based on a recommendation of the NATO Informal Working Group, the SGMS is composed of representatives of the 13 of the NATO member nations. Its mandate continues through Fall 1998 with the delivery of the draft NATO MSMP and a NATO M&S policy recommendation.

The SGMS has three subgroups drawn from the NATO Military Authorities, the government M&S community, and the NATO Industrial Advisory Group.

3. DMSO INDUSTRY DAYS SET FOR JUNE 2-3

The DMSO will host the Seventh Annual State of Modeling and Simulation Briefing to Government and Industry, or DMSO Industry Days, June 2-3, at the Ritz-Carlton Hotel in McLean, Va.

The program will present the latest modeling and simulation (M&S) trends and developments in the DoD and industry.

Activities are intended for industry and government/military executives, strategic planners, program managers and senior technical managers.

The event is sponsored by the DMSO, the National Training Systems Association (NTSA), and the M&S Industry Steering Group of the National Defense Industrial Association (NDIA).
For conference registration information, contact Barbara McDaniel, NTSA, (703) 247-2569 or (800) 677-6897, Fax (703) 243-1659, or e-mail bmcdaniel@ndia.org.

Additional conference information, registration instructions and agenda are available on line at <http://www.trainingsystems.org>.

4. DMSO BOOTH AND DEMONSTRATIONS SCHEDULE

The DMSO will participate in a number of conferences and workshops during the coming year with an information booth and/or demonstrations of the DoD High Level Architecture (HLA) and other elements of the Common Technical Framework (CTF) and Common Services. Those events currently planned for participation are:

- March 16-19, NDIA Simulation Based Acquisition (SBA) Workshop in Orlando (information booth only)
- April 28-30, International Training and Education Conference (ITEC) in Lausanne, Switzerland
- June 2-3, DMSO Industry Days in McLean, VA
- Sep. 14-18, Simulation Interoperability Workshop (SIW) in Orlando
- Nov. 30-Dec. 3, Industry/Interservice Training, Education and Simulation Conference (I/ITSEC) in Orlando

Take advantage of some of these opportunities to get the latest information and look at some of DoD's key M&S projects.

5. DoD M&S GLOSSARY APPROVED FOR PUBLICATION

The DoD Modeling and Simulation (M&S) Glossary of Terminology (DoD 5000.59-M), was approved for publication on Jan. 15 by Dr. Jacques Gansler, the Under Secretary of Defense for Acquisition and Technology.

The glossary's publication by the DoD represents a significant and needed addition to the growing documentation base for M&S. It will facilitate common usage and understanding of terms within the DoD and form the baseline for addition and/or refinement of M&S-related terms and their definitions as M&S usage evolves within the Department.

At press time the glossary was undergoing a final editorial review before printing. An electronic version is available for viewing and downloading on the DMSO web site at <http://www.dmsomil/docslib/>

6. DoD ANNOUNCES DATES, LOCATIONS FOR NINE
M&S STAFF OFFICER COURSES IN '98

The Department of Defense (DoD) Modeling and Simulation (M&S) Staff Officer Course (MSSOC), a key element of the DMSO's M&S education program, will be

conducted nine times during 1998.

Students come from the military services; OSD, Joint and CINC staffs; and Defense agencies. The course encompasses the three M&S domains: training, analysis and acquisition. Priority for attendance goes to military personnel and DoD civilians. Representatives from other government agencies, DoD contractors and allies are invited to apply and will be considered for admittance on a case-by-case basis.

The MSSOC provides an overview of M&S fundamentals, organizations, policies, requirements, programs, and resources. The course, which debuted in November, provides the new M&S staff officer with the basic knowledge and tools required to be immediately effective.

Instruction is grouped into five major themes:

1. Fundamentals of M&S: These set the stage for the course and include "M&S Basics and Scope," "History of M&S," "DoD M&S Strategy," and "Today's Environment."
2. Common Technical Framework: The core technical elements of the DoD strategy, to include the "High Level Architecture (HLA)," "Common Models of the Mission Space (CMMS)" and "Data Standards."
3. Representations in M&S: These lessons explain the complex nature and issues surrounding the creation of a realistic M&S replication in the areas of "Environmental Representation," "Systems Representation," and "Human Behavior Representation."
4. Common Services: These lessons describe the resources and customer assistance available as part of the DoD strategy, to include the "M&S Operational Support Activity (MSOSA)," "M&S Resource Repository (MSRR)," "Communications Systems," and "Verification, Validation, and Accreditation (VV&A)."
5. M&S in the Future: These lessons describe future M&S trends in "Emerging Technologies," where M&S is being taught in "Future M&S Opportunities," and outlines major joint simulation projects in "Requirements Development."

Admission is by application only. On-line application is available on the DMSO web site at <http://www.dmsso.mil/SOC/>.

Other M&S courses under development include a module that supports acquisition program offices, as well as a Senior Executive Orientation.

M&S Staff Officer Courses, Dates and Locations:

- MSSOC 98-2: Feb. 23-27, Arlington, VA
- MSSOC 98-3: March 23-27, Alexandria, VA
- MSSOC 98-4: April 13-17, Orlando, FL
- MSSOC 98-5: May 18-22, Arlington, VA
- MSSOC 98-6: June 15-19, West Point, NY (for M&S educators only)
- MSSOC 98-7: July 13-17, Arlington, VA
- MSSOC 98-8: Aug. 3-7, Warrior Preparation Center, Einsiedlerhof, Germany
- MSSOC 98-9: Sept. 21-25, Albuquerque, NM
- MSSOC 99-1: Oct. 26-30, Arlington, VA

7. DMSO CONTINUES TO EVOLVE HLA TRAINING;

PROGRAM EXPANDS DOMESTICALLY, INTERNATIONALLY

The Defense Modeling and Simulation Office (DMSO) continues to evolve its High Level Architecture (HLA) training program. Geared for several levels and types of DoD modeling and simulation (M&S) users, the training offers open-registration, regional events that present a comprehensive introduction to the HLA, and a concentrated hands-on session for developers and users.

HLA training is also being provided in response to foreign requests. A series of four tutorial sessions will be presented in a special session prior to the International Training and Education Conference (ITEC) in Lausanne, Switzerland in April. These tutorials will cover a Basic Overview of the HLA, Object Model Development and Supporting Software, and Time Management. A week earlier, a basic tutorial and a four-day HLA hands-on practicum will be conducted in the Netherlands for the European Space Agency.

The existing HLA Training Library supports tailoring regional presentations to specialized sessions for DoD agencies and M&S organizations. Recent additions to the HLA training inventory will support either half-day focused sessions as regional training event extensions, or as stand-alone half-day focused events to further support specialized HLA training needs.

Currently these focused training modules are being developed in four subject areas: Federate Compliance Testing, Adapting Your Simulation to Use HLA, Use of Automated Tools to Support HLA Object Model Development, and HLA Federation Development and Execution.

The Federate Compliance Testing module will focus on how federates are certified as compliant with the HLA through a process of demonstrating their conformance to the rules and specifications of the HLA. The Federate Compliance Test process will be described, and the Web-based Federate Compliance Test System procedures will be demonstrated for a sample federate.

The Adapting Your Simulation to Use HLA module will aid in planning the adaptation of legacy simulations to use the HLA, and will be presented in three parts. The first part is designed to help analysts plan for HLA implementation. It provides guidance on how to design your first Simulation Object Model (SOM) and then describes how to identify which Run-time Infrastructure (RTI) services your simulation requires. The second part focuses on software implementation issues that arise when adapting a simulation to use the HLA. Interoperability topics discussed include tick management, two-way interfaces, modularity, automating exception handling, and data representation. The third part is a case study, which demonstrates how the Naval Simulation System (NSS) program applied the ideas presented in the earlier modules to adapt the NSS to implement the HLA. The overall approach presented here can be used to adapt other simulations for HLA use as well.

The module focusing on Use of Automated Tools to Support HLA Object Model Development will begin with an overview of the Federation Development and Execution Process (FEDEP), and a brief discussion of how the HLA Tool Architecture was developed to map opportunities for automation to FEDEP activities. This will be followed with an overview of the HLA object modeling process, highlighting alternative OM development strategies where applicable. The main topic of this module will follow, which is to describe

and demonstrate the capabilities of the HLA Object Model (OM) Tool suite. The suite consists of the Object Model Development Tool (OMDT), Object Model Library (OML), and Object Model Data Dictionary System (OMDDS). Those attending this session will learn how to use the OMDT to complete Federation Object Models (FOMs) and Simulation Object Models (SOMs) compliant with the HLA OMT. Attendees will also learn how to use key features of the OML to search for, download and upload HLA object models, and how to use the OMDDS to identify standards-based components for constructing FOMs and SOMs.

The HLA Federation Development and Execution session focuses on providing Program Managers, Systems Engineers, and System Integrators insight into the process of building federations. Drawing from real-world experience, the attendees walk through the five-step Federation Development process. For the latest training information visit the new HLA web site at <http://hla.dmsomil>, and select the "HLA Education and Training" topic. The training page lists the scheduled domestic training events; their agendas; downloadable training materials (posted not later than five working days prior to a scheduled event); and a link for on-line registration for HLA training events. The HLA Help Desk is also available to answer training-related questions. Send questions via e-mail to hla@msis.dmsomil.

Upcoming HLA Regional Training Events:

Mid Atlantic	March 26-27	Alexandria, VA
West	April 21-22	Menlo Park, CA
Northeast	May 19-20	Boston, MA
Midwest	June 25-26	Wright-Patterson AFB, OH

Upcoming HLA Hands-On Training Events (All sessions are conducted in Alexandria, VA):

March 23-26	May 18-21
April 6-9	June 8-11
April 20-23	June 22-25
May 4-7	

For details on registrations deadlines and the most current information visit the HLA web site at <http://hla.dmsomil/> and select the "HLA Education and Training" topic.

8. HLA FEDERATE COMPLIANCE TESTING
-- LIBRARY, REGISTRATION, HELP AVAILABLE ON LINE

High Level Architecture (HLA) Federate Compliance Testing is now available through a World Wide Web-based interface which includes a reference library of documents, on-line help, e-mail and a test registration process.

The HLA Federate Compliance Testing process consists of three compliance tests to evaluate whether the federate conforms to items specified in the Compliance Checklist. The Simulation Object Model (SOM) Test evaluates whether the SOM conforms to the Object Model Template (OMT) Specification. The Interface Test evaluates whether the federate conforms to the Interface Specification. The Conformance Cross-Check Test evaluates consistency

between the federate's SOM and the Conformance Statement.

The federate being tested must provide a SOM in the OMT Data Interchange Format (DIF) to the Certification Agent. It must also provide a Conformance Statement, or list of interface services that the federate can invoke and/or respond to. Thirdly, the federate may provide scenario data to suggest parameters for the interface test. Fourth, the federate must exercise the test sequence in a federation with the Certification Agent's test utility, to demonstrate that it can correctly invoke and respond to the interface services in the Conformance Statement.

Federates are tested to a particular version of the HLA Interface OMT Specifications, not an RTI version. Current testing supports versions 1.1 and 1.3 of the specifications, and RTI versions 1.0.2 and higher.

The Compliance Checklist, which defines the HLA Federate Compliance Test requirements, was developed and is maintained by the DoD HLA Architecture Management Group (AMG). The Compliance Checklist may be referenced by accessing the HLA web site at <http://hla.dmsomil>, under the topic "HLA Policy and Compliance Testing."

The Georgia Institute of Technology has been responsible for the development of the HLA Federate Compliance Test program and the automated support tools used in the conduct of the tests. A Certification Agent, AB Technologies in Alexandria, Va., has been selected by the DMSO to conduct the compliance tests. Upon successful completion the DMSO issues a formal Certification of HLA Compliance. Contact the Certification Agent at (703) 998-1634, or on line at hla@msis.dmsomil.

9. AMG APPROVES HLA SPECIFICATIONS 1.3

Version 1.3 of the High Level Architecture (HLA) Specifications was approved on February 11th at the 23rd meeting of the Architecture Management Group (AMG), a subordinate technical group of the Department of Defense's Executive Committee for Modeling and Simulation (EXCIMS).

The specifications include the HLA Rules, the HLA Object Model Template (OMT) Specification, and the HLA Interface Specification.

Major updates promulgated in HLA Specifications 1.3 documentation are as follows:

- In the HLA Rules Specification 1.3 there is an update of nomenclature and clarification of rationale, along with formatting and packaging in Institute of Electrical and Electronics Engineers (IEEE) format.
- In the OMT Specification 1.3 there is an update incorporating the Data Distribution Management Template, and the OMT Data Interchange Format (DIF). The OMT extensions have been eliminated as a separate document; needed functions are incorporated into the base specification. Finally the entire specification is formatted and packaged in IEEE format.
- The HLA Interface Specification 1.3 has incorporated the Management Object Model (MOM) as well as the FED DIF into the specification. Increased functionality has been added to support save and restore, cold restart and

passive subscription for logging. A general synchronization capability has replaced pause and resume. Also, an increased degree of specificity based on formal analysis (Wright and Zed) has been added. Finally, a general revision and update of supporting materials to meet IEEE requirements, along with formatting and packaging in IEEE format has been accomplished.

Alterations to HLA specification documentation to accommodate the IEEE format pose no substantive changes to content, other than terminology and format. These documents will be forwarded to the IEEE to begin the formal process of generating an IEEE HLA standard. The documents are available on the DMSO HLA web site at <http://hla.dmsomil> under the topic "HLA Technical Specifications."

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10. RTI 1.3 FOR SUN/SOLARIS DUE FOR RELEASE IN MARCH
   -- COMPLIANT WITH HLA SPECIFICATIONS 1.3
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The DMSO will release version 1.3 of the Runtime Infrastructure (RTI) for the Sun/Solaris platform in March 1998. This version of the RTI is compliant with version 1.3 of the High Level Architecture (HLA) Specifications (see story above), and incorporates all RTI services.

The initial release of RTI 1.3 is for the Sun/Solaris platform. Other platform ports, including SGI, Windows NT, HP and IBM, will follow. Additional platform/operating system ports may follow, depending on the needs of HLA users.

The RTI 1.3 release will include the installation guide and software, the RTI 1.3 libraries, sample applications and programmer's guide and manual pages. The release will also include a version 1.1 to 1.3 migration guide. The migration guide discusses the present approach and explains differences in RTI initialization data, federation execution data, RTI execution and federation executive, linking and running, constants and types, services, and example programs.

Release of the Benchmark Programs will follow RTI 1.3. Designed to provide performance indicators for each of the major categories of inter-federate exchange through the RTI, these programs will provide easy to understand metrics to facilitate comparison and investigation of factors influencing federation performance.

Also scheduled for release in March 1998 is version 1.3 of the HLA Object Model (OM) Tool Suite. This version of the OM Tool Suite includes the Object Model Development Tool (OMDT), access to the Object Model Library (OML), and access to the Object Model Data Dictionary System (OMDDS).

The DMSO is beginning work on additional tools to focus on federation execution planning and verification, and runtime management and data collection. In development now are a Federation Execution Planners Workbook Tool, a Federation Verification Tool, a Federation Management Tool and a Federation Data Collection Tool. More descriptive information, and potential release dates will be available as work progresses in this area.

Currently available software tools (RTI 1.3, OM Tool Suite) may be obtained by registering with the HLA Software Distribution Center on the HLA web site at <http://hla.dmsomil>. Select the "HLA Software Distribution Center"

topic, or, for OML and OMDDS, select the "Federation Development Process and Tools" topic, then the "Federation Development Tools" topic.

11. DMSO SEEKS STANDARDIZATION, WIDER EXPOSURE FOR HLA THROUGH OMG

The Defense Modeling and Simulation Office (DMSO) is seeking standardization, wider exposure and application of the High Level Architecture (HLA) through participation in the Object Management Group (OMG).

The OMG is a not-for-profit consortium of major software developers and users across the commercial, government, and academic arenas, whose goal is to create standards for distributed object technology. OMG standards are meant to be commercially useful. They are derived as quickly as possible and are backed by implementations from member organizations. The OMG's keystone standard is the Common Object Request Broker Architecture, or CORBA. The OMG, which produces no software and has a small staff, was chartered in the U.S. in 1989 and now has over 800 members and is represented around the world.

The OMG chartered a special interest group in distributed simulation, called the SimSIG, in January 1997. The SimSIG has worked during the past year in several directions: influencing existing and emerging standards to facilitate building distributed simulation infrastructure and toolkits; encouraging CORBA vendors to supply implementations of the services most needed in our community; and, most importantly, encouraging interest in industry-wide standards for simulation infrastructure. As interest develops, the SimSIG will pursue the typical OMG process to specify an industry-consensus set of services for simulation.

The DMSO, as a contributing member of the OMG, is submitting the RTI interface specification to the OMG for standardization as an unsolicited proposal for a specification. The OMG will issue the proposal as a request for comments, allowing anyone in the industry to comment. If all goes well, an initial OMG standard will be adopted in the Fall of 1998. This effort will run in parallel with the Institute of Electrical and Electronics Engineers (IEEE) standardization process. Dr. Frederick Kuhl, fkuhl@mitre.org, is the DMSO's technical representative to the OMG and co-chair of the SimSIG.

Those who wish to track or contribute to the SimSIG's work can subscribe to the "simsig" mailing list at request@omg.org, visit www.mews.org/omg-sim/ or attend OMG meetings, which occur about every eight weeks. Meetings are announced on the World Wide Web at http://www.omg.org/.

12. VV&A ADDRESSES CREDIBILITY OF MODELS, SIMULATIONS

As appreciation of the pervasive use of models and simulations continues to expand within the DoD community through such initiatives as the High Level Architecture (HLA), Distributed Mission Training, and Simulation Based Acquisition (SBA), an increased emphasis will be placed on the credibility of these models and simulations.

A robust Verification, Validation and Accreditation (VV&A) process and

supporting infrastructure are critical elements for establishing modeling and simulation (M&S) credibility.

The DMSO VV&A Program is working to address the issues and processes associated with establishing M&S credibility. An important first step in the VV&A program was the approval of a DoD policy instruction, DoD Modeling and Simulation Verification, Validation, and Accreditation, DODI 5000.61, dated April 29, 1996. Additionally, the DMSO published the DoD VV&A Recommended Practices Guide (RPG) in November 1996, which provides an overview of the philosophy, underlying principles, and methodologies associated with a generic VV&A process.

The 1998 VV&A Program will build off the already established guidance, focusing on two primary concepts: quality assurance and risk management. Quality assurance will address the issue of credibility and formalism in the M&S development/application process, building in authoritative representations and behaviors. Risk management will highlight methodologies for identifying errors early on in the development lifecycle and suggesting mitigation strategies.

Key elements of the current VV&A Program include:

- An evolved and refined RPG which addresses the differing perspectives and responsibilities associated with VV&A (e.g., the M&S user, program manager, V&V practitioner) as well as such topical issues as:
 - The relationship between M&S VV&A and Data Verification, Validation and Certification (VV&C)
 - The relationship between M&S VV&A and the Test and Evaluation (T&E) process
 - The distinction between verification and validation of software (Software Independent V&V [IV&V]) and verification and validation of representations (M&S V&V)
- A common, core template for documenting VV&A histories, allowing for ready access to and sharing of VV&A information. VV&A information will not only benefit current and future VV&A efforts, but will also provide support to the associated M&S development, implementation, and testing efforts.
- A robust toolkit, which supports the defined VV&A process, it's associated methodology, and implementation techniques.
- A VV&A curriculum, which will improve the DoD institutional knowledge base through the establishment of a strong educational foundation for VV&A.

The strong interest in VV&A found within the DoD is also present among members of the North Atlantic Treaty Organization (NATO). The DMSO has received a request from the United Kingdom's Defence Evaluation and Research Agency (DERA) to provide information which would support an exchange of insights related to VV&A and VV&A methods.

Questions related to VV&A may be forwarded to the DMSO VV&A Program lead, Ms. Simone Youngblood, at smyoung@msis.dmsi.mil. See the VV&A page on the DMSO web site at <http://www.dmsi.mil/projects/vva/>.

13. MSRR, MEL MOVING TOWARD FIELDDED OPERATIONAL CAPABILITY IN '98

The Defense Modeling and Simulation office (DMSO) has been leading two major complementary development efforts to support the modeling and

simulation (M&S) community's access to resources. These development efforts, the Modeling and Simulation Resource Repository (MSRR) and the Master Environmental Library (MEL), will be moving to a fielded operational capability later this year, with sustainment by the Modeling and Simulation Operational Support Activity (MSOSA).

The MSRR is designed to facilitate sharing of resources within the DoD M&S community. The initial system implementation is available on line at <http://www.msrr.dmsso.mil> (Internet) and <http://msrr.spawar.navy.smil.mil> (SIPRNet). For those SIPRNet sites without DNS services, the classified IP address is 140.199.160.81.

The MSRR gives DoD Services, agencies, other components and their authorized agents, the ability to place resources on line, in an unclassified and/or classified environment, for discovery and delivery to authorized users. Resources appropriate for registration in the MSRR may include any materials that can be electronically cataloged and described, such as models, simulations, databases, tools, and standards. The system includes security features which permit the resource owner to designate open access or selectively restrict download of resources.

The MEL, an internet-based data discovery and retrieval system, is the environmental node of the MSRR. A working prototype on the World Wide Web at <http://mel.dmsso.mil>, it provides access to geographically distributed resource sites. Users can find and order, or subscribe, to oceanographic, meteorological, terrain and near-space data and products. It currently has nine resource sites installed with more to come soon.

The MEL is sponsored by the DMSO for the purpose of providing real-time, scenario, historical, and climatological datasets for simulations, mission planning, scene modeling, etc., to M&S consumers. Existing data repositories can become MEL resource sites without changing their current data management methods or architecture.

The MEL project is dedicated to using internationally recognized standards for metadata and data formats wherever feasible. Its design uses a U.S. National Spatial Data Infrastructure (NSDI) type front end with a unique ordering and delivery back end.

MSRR and MEL technical management is being moved for operational implementation to the MSOSA this year. This move will provide full access service to MSRR and MEL customers and resource sites, as well as providing help desk support. Both Internet and SIPRNet service will be provided. The SIPRNet will greatly expand the amount of data and information available to qualified users. This level of access will ensure that the full range of resources is available to support modeling and simulation applications and users.

For further information contact:

MSRR -- Mr. Gary Misch, (703) 575-1094, gl@msrr.dmsso.mil
MEL -- Dr. Richard Siquig, (408) 656-4732, siquig@nrlmry.navy.mil
DMSO Program Manager -- LTC Harry Thompson, (703) 998-0660, thompson@msis.dmsso.mil

14. SEDRIS CONTINUES TO MATURE, MOVES TOWARD STANDARD

After three years of development, the Synthetic Environment Data Representation and Interchange Specification (SEDRIS) project will complete definition of its interchange specification in August 1998 and proceed toward acceptance as a national and international standard.

Modeling and simulation (M&S) data providers and consumers alike can use SEDRIS mechanisms as an intermediary between their own system formats and other databases which have already been built over similar geographic regions. That reuse will result in significant savings to individual programs.

The SEDRIS has been developed to accommodate the unambiguous transfer of natural environment databases among heterogeneous simulation systems. The SEDRIS specification has a supporting application program interface (API) and a data interchange format (DIF).

In order to optimize efficiency of the DIF and further test and refine the underlying data model, a series of interchange experiments are scheduled. Several small-scale interchange experiments using small environmental databases and three-dimensional (3D) models have been completed during development with participation by a cross section of industry and U.S. Government.

The SEDRIS development project is sponsored by the DMSO through the DoD Modeling and Simulation Executive Agents (MSEAs) for authoritative representation of the natural environment. For more information visit the SEDRIS web site at <http://ww.sedris.org>, or contact the development team through Karen Williams, the Terrain MSEA SEDRIS project leader, at (703) 824-3454 or kwilliam@msis.dmsso.mil.

15. MSOSA SUPPORT EXPANDS; INTELINK WEB SITE AVAILABLE

The Modeling and Simulation Operational Support Activity (MSOSA) is the first place to check when you need modeling and simulation (M&S) advice, assistance or information. There are now, however, additional reasons to look to MSOSA for support.

In a proactive effort to support the M&S community, the MSOSA has established Special Interest Areas (SIAs) on its web site. The first of these SIAs support the popular topics of Operations Other Than War (OOTW) and Simulation Based Acquisition (SBA). Features include an on-line collection of documents, links to related web sites and discussion areas where registered users can exchange information using a series of interactive bulletin boards focused on specific subjects. Additional SIAs are under development to support such topics as the M&S aspects of information operations, logistics and training technology development.

The MSOSA has also considerably expanded its help desk functions over the past year. In addition to providing a quick source of assistance on general M&S topics, the MSOSA is currently functioning as the help desk for the Modeling and Simulation Resource Repository (MSRR) and the High Level Architecture (HLA) programs. Requests for assistance submitted through the MSRR and HLA web sites, <http://www.msrr.dmsso.mil> and <http://hla.dmsso.mil> respectively, are routed through the MSOSA. Beginning this summer, MSOSA will expand its help desk operation to field requests for assistance in the

use of the Master Environmental Library (MEL).

MSOSA services are now available to those in the M&S community who must deal with classified information. The main MSOSA Help Desk, collocated with the DMSO office, has a STU III for communications up to the collateral Secret level. The MSOSA also operates a help desk cell at the Defense Intelligence Agency's (DIA) Defense Intelligence Analysis Center (DIAC) that enables support at the Top Secret/Sensitive Compartmented Information (TS/SCI) level. The telephone number for the MSOSA help desk cell at the DIAC is (202) 231-8935 (Gray phone, 981-1706). Secure fax is (202) 231-8935. In the next few months, look for an announcement on the establishment of an MSOSA web site on the Secret Internet Protocol Router Network (SIPRNet). Currently, requests for MSOSA assistance requiring the exchange of classified information may be submitted to Mr. Bob Wyman at cnwymrd@dia.ic.gov on the SIPRNet.

For those who have access to Intelink (TS/SCI high system), there is an MSOSA web site at http://www.dia.ic.gov/proj/model/ms_help/default.htm.

During the next few months look to the MSOSA to continue to improve the services it provides with such features as an on-line M&S calendar, a frequently-asked-questions section on its web site and expanded information resources.

MSOSA-Net, the MSOSA's unclassified web site, is located at <http://www.msosa.dmsso.mil>.

Call the MSOSA Help Desk at (703) 998-1623/1624, or toll free in the Continental U.S. at (800) 510-6399. International toll free telephone numbers are also available from several foreign countries. Those numbers are listed on the MSOSA web site. Send e-mail requests to msosahelps@msosa.dmsso.mil.

16. ASK_DMSO

-- CONSOLIDATED LISTING OF DMSO'S INFORMATION RESOURCES...

***** ASK_DMSO -- ASK_DMSO@msis.dmsso.mil

Have a question for the DMSO about DoD modeling and simulation, but don't know who, or where or which help desk to call? Send your query to ASK_DMSO@msis.dmsso.mil. We'll sort it out, send your question to the right people and get you an answer.

Or see pages 6-7 if you'd like to see a topical listing of DMSO-sponsored information resources available on line.

***** DMSO Home Page -- <http://www.dmsso.mil>

The DMSO Home Page is a good starting point for a more general search for DoD M&S information. You'll find a variety of information there, ranging from the DoD M&S Master Plan (MSMP) with links to elements of the Common Technical Framework to the M&S Executive Agents, to M&S Services and Resources, to Recent and Future Activities.

***** DMSO NEWS -- Electronic Editions

"DMSO News" is DMSO's quarterly newsletter for the Defense modeling and simulation community.

-- E-MAIL EDITION

To receive an e-mail edition (ascii text) of the newsletter, send a

request (no subject line) to: listproc@msis.dmsso.mil
with the body of the message reading
subscribe newsltr <firstname> <lastname>

-- WEB EDITION

View the latest edition, as well as archived copies, on the DMSO web site
at: <http://www.dmsso.mil/docslib/newsltr/dmssonews>

***** HLA HOME PAGE -- <http://hla.dmsso.mil>

The DMSO's HLA web site presents a variety of HLA-specific topics of
interest.

You'll have the opportunity to submit comments and questions to the HLA
Help Desk, register for HLA training, order HLA software, learn "What's
New" and find out about "Upcoming Events." There's also an HLA Frequently
Asked Questions (FAQ) page.

***** REGISTER FOR HLA TRAINING -- <http://hla.dmsso.mil>

To review schedules and register for a specific scheduled event, in either
the regional or hands-on sessions, go to the HLA Home Page, select HLA
Education and Training in the Topics pane, then the appropriate link at
Registration and information for...This will take you to the appropriate
page for schedules and the registration process.

***** HLA ON-LINE

HLA On-line, a moderated mailing list, is a good way to keep up with what
is going on in the HLA community and for obtaining information on the
availability of HLA supporting software.

To subscribe, send an e-mail (no subject line) to:

listproc@msis.dmsso.mil

with the body of the message reading

subscribe hla_online <yourfirstname> <yourlastname>

***** HLA HELP DESK -- hla@msis.dmsso.mil

An online help desk is available through the MSOSA to respond to
HLA-specific queries. Send questions and comments to the above address.

***** ORDER HLA SOFTWARE (RTI, OMDT) -- <http://hla.dmsso.mil>

The DMSO has sponsored the development and distribution of software that
supports the HLA Federation Development process and has made it publicly
available through the HLA Software Distribution Center. Runtime
Infrastructure (RTI) and Object Model Development Tool (OMDT) software are
currently available for download through this site. Visit the HLA Home
Page and select HLA Software Distribution Center in the Topics frame; or to
access the Object Library (OML) and Object Model Data Dictionary System
(OMDDS) select the Federation Development Process and Tools topic, then the
Federation Development Tools topic.

The current version of the RTI is openly available to U.S. government
activities, commercial activities and foreign interests.

After an order is submitted it is committed to a database and the DMSO
order authorization agent is notified. Upon approval, the user will be
given a File Transfer Protocol (FTP) account and notified with instructions
for downloading the distribution.

These procedures apply to all releases (U.S. government, foreign, and
industry) of the RTI.

Note: You are required to be a registered user of the distribution center
in order to download these software products. On-line registration is

available.

Registered users will be notified of new releases of each software product when they become available for download. The distribution center does not provide technical support for the software products found on this site; however, the contact information for technical support is provided with each software product.

***** RTI SUPPORT DESK -- rti_support@triton.dmsso.mil
The RTI Support Desk hosts a lab with all supported platforms and operating environments; WWW, FTP, and e-mail Internet access; dedicated phone lines; and technical personnel dedicated to the resolution of users problems.

***** OMDT SUPPORT SITE -- <http://www.aegisrc.com/Support/OMDT/>
Visitors to the OMDT Support site will be prompted for a username and password in order to enter the site. Enter the username `omdtuser` and password `model`, respectively. Visitors must then register (separate from the HLA Software Distribution Center registration) in order to receive support.

***** MSRR -- <http://www.msrr.dmsso.mil>
Visit the MSRR on line or contact Gary Misch at (703) 575-1094 or gl@msrr.dmsso.mil.

***** MEL -- <http://mel.dmsso.mil>
Visit the Master Environmental Library (MEL) on line or contact Dr. Richard Siquig at (408) 656-4732 or siquig@nrlmry.navy.mil.

***** SEDRIS -- <http://www.sedris.org>
Visit the Synthetic Environment Data Representation and Interchange Specification (SEDRIS) web site, or contact the development team through Karen Williams, the Terrain MSEA SEDRIS project manager, at (703) 824-3454 or kwilliam@msis.dmsso.mil.

***** ADS -- <http://208.145.129.4/dtwg/vvc/ads/>
Authoritative Data Sources (ADS) information is currently available at the above address. It will soon be available to the general public through the MSRR.

***** DAVIE and JDEPD -- msfdad@msis.dmsso.mil
For information about the Data Verification Interactive Editor (DAVIE) or the Joint Data Engineering Process Demonstration (JDEPD) send a request to the address above.

***** VV&A -- <http://www.dmsso.mil/projects/vva/>
See the Verification, Validation and Accreditation (VV&A) page on the DMSO web site. Questions related to VV&A may be forwarded to the DMSO VV&A Program lead, Ms. Simone Youngblood, at smyoung@msis.dmsso.mil.

***** M&S EXECUTIVE AGENTS (MSEAs)

-- TERRAIN
Terrain Modeling Project Office
NIMA TT MS D-33
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Bethesda, MD 20816-5003
Phone: (301) 227-3492 (DSN 287)

FAX: (301) 227-3904
E-mail: lillegardk@nima.mil or halls@nima.mil
URL: <http://www.tmpo.nima.mil>

-- OCEAN

Ocean Executive Agent Office
Naval Research Laboratory Code 7306
4555 Overlook Ave., SW
Washington, DC 20375-5320
Phone: (202) 404-1426 (DSN 754)
FAX: (202) 404-1662
E-mail: oceanea@msis.dmsomil
URL: http://msis.dmsomil/ocean_ea/ OceanHome.html

-- AIR and SPACE

Modeling and Simulation Division
Air Force Combat Climatology Center (AFCCC)
859 Buchanan St., Room 309
Scott AFB, IL 62225-5116
Phone: (618) 256-3902 (DSN 576)
FAX: (618) 256-3964
E-mail: msea@thunder.safb.af.mil
URL: <http://thunder.safb.af.mil/html/msea>

-- INTELLIGENCE

Defense Intelligence Agency (DIA) liaison to the DMSO
Mr. Richard Bernstein
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SUBJECT : <none>
MESSAGE BODY : subscribe newsltr Firstname Lastname

(of course, substitute your REAL first and last name)

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--GETTING AN INDEX OF BACK ISSUES

To get an index of back issues, which you may use to get a back issue of a specific issue, send an email with the following format:

TO : listserver@msis.dmsso.mil
SUBJECT : <none>
MESSAGE BODY : index newsltr

--GETTING A SPECIFIC BACK ISSUE/ARCHIVE

The results of the "index" command will help you "get" a specific back issue. Back issues are of the form "newsVOLUME#.ISSUE#" To get the March 1997 issue, send an email with the following format:

TO : listserver@msis.dmsso.mil
SUBJECT : <none>
MESSAGE BODY : get newsltr news2.1