



# MANPRINT BULLETIN

Vol. VI No. 7

September/October, 1992

## ODCSPER COORDINATOR NOTES

- \* THIS IS YOUR LAST ISSUE unless you returned the July/August Reader Response as instructed in the readership survey. ABSOLUTE LAST CHANCE to stay on the Bulletin Mailing list: return the reader response form with all telephone & fax numbers and E-mail address (if you have one) by 28 Sept 92.
- \* POC LIST BEING REPLACED by a modified MANPRINT telephone directory. It will have an organizational section followed by an alphabetical listing. We are getting this information from your Reader's Response forms. Therefore, you may be on the bulletin mailing list but not be in the phonebook, unless you provided your numbers.
- \* MANPRINT PRACTITIONERS' FORUM '93 It's not too early to start thinking about this. Send in any suggestions you have, including agendas speakers, topics, panels, location.....
- \* BULLETIN QUALITY depends on you. We are not staffed to write articles. What you see in the Bulletin depends on what you send in. Mail and fax in those articles you have written, those bits you have on lessons learned, meeting notices, humor, etc.

- Harry Chipman  
ODCSPER Coordinator

<b>ODCSPER Coordinator Notes ..</b>	<b>1</b>
Harry Chipman	
<b>MANPRINT Training Steering Committee Meeting .....</b>	<b>2</b>
Maj David Hoopengardner	
<b>The Soldier as a System Expo/Symposium .....</b>	<b>2</b>
Harry Chipman	
<b>Risk Management vs. Risk Assessment .....</b>	<b>3</b>
<b>Integrated Unit Simulation System .....</b>	<b>4</b>
<b>FY93 MANPRINT Training Schedule .....</b>	<b>5</b>
<b>The Defense Technical Information Center .....</b>	<b>7</b>
Gretchen Eberhard	
<b>Hughes Aircraft Company's Ground Systems Group Commits to MANPRINT ...</b>	<b>9</b>
<b>Meetings of Interest .....</b>	<b>10</b>

## CONTENTS

*"Remember the Soldier."*

**MANPRINT TRAINING STEERING  
COMMITTEE MEETING**

The Deputy Chief of Staff for Personnel Integration (DCSPI), part of the U.S. Total Army Personnel Command and the proponent for MANPRINT Training in the Army, hosted the annual MANPRINT Training Steering Committee Meeting in late May in Alexandria, Virginia. This multi-agency advisory committee was established to assist the DCSPI in the discharge of duties as the chief MANPRINT trainer for the Army.

The purpose of this year's meeting was to review the current Program of Instruction for the MANPRINT Action Officers Course (MAOC) and the MANPRINT for Managers Course (MFMC) and make any necessary changes to course material. Representatives included the Office of the Deputy Chief of Staff for Personnel; Training and Doctrine Command; Army Materiel Command; Human Engineering Laboratory; Army Research Institute; Director of Information Systems Command, Control, Communications and Computers; Office of the Surgeon General; and the Army Logistics Management College.

In addition to fine-tuning current course material, the committee recommended tailoring the courses to meet the growing demand for information systems. Other significant outcomes from the meeting included revising the MANPRINT for Senior Leaders Seminar to garner high-level support for MANPRINT; and the development of MANPRINT videotape for new MANPRINTERS. The committee also approved the FY 93 Training Schedule. The MANPRINT Training Steering Committee's next meeting is scheduled for December 1992 and will include representatives from all MANPRINT domains. Anyone interested in obtaining a copy of the After Action Review from the meeting should contact MAJ Hoopengardner at DSN 221-3706, Commercial (703) 325-3706.

- MAJ David Hoopengardner  
Chief MANPRINT Training Branch

**The Soldier as a System Expo/Symposium  
30 June - 1 July 1992**

The Soldier System is the individual soldier and everything worn, consumed, or carried for individual use in a tactical environment. The Soldier as a System (SAAS) Expo was organized around the five warfighting capability areas. A total of 39 exhibits showed some of the significant developments pursued and accomplished throughout the SAAS program. The SAAS program supports the Army's 8th Science & Technology Thrust, The Warrior's Edge, with its goal to modernize the soldier as a battlefield system and to achieve equivalent status with major weapon systems.

The symposium concurrent with the expo described the programmatic behind the expo, highlighted future needs, and examined the supporting technological areas and problems. The SAAS program Technology Base Investment Strategy to modernize the soldier involves coordination among TSM-Soldier, PM-Soldier, and the Technology Base Executive Steering Committee (TBESC). TSM-Soldier determines Soldier System equipment. TBESC oversees and coordinates the technology programs necessary for the development of the Future Soldier System.

Conceptually, SAAS seems much like an application of the MANPRINT philosophy. MANPRINT methods and procedures could be adapted for SAAS. However, there is a fascination with technology in SAAS which has a "deja vu" quality to it reminiscent of the weapon systems which brought MANPRINT into existence. Currently, SAAS has some serious technological problems. Soldier computer, soldier radio, and individual micro-climate cooling needed for the BLOCK II Soldier depend on individual power which has not been adequately developed.

- Harry Chipman  
ODCSPER Coordinator

*See page 4 for more information on the  
Soldier as a System.*

## RISK MANAGEMENT VS. RISK ASSESSMENT: WHAT'S THE DIFFERENCE?

*Editor's note: The following article is an excerpt from the December 1991 issue of Flightfax, published by U.S. Army Safety Center.*

The terms "risk management" and "risk assessment" are often used synonymously when, in fact, they are different. And safety personnel often use these terms as though they are safety specific, when, in fact, they are not. It's time to set the record straight.

Risk management is a tool that helps leaders make sound decisions in a logical manner. Used in a positive command climate, risk management can become a mind set that governs all unit missions and activities.

Risk management enables leaders at all levels to do exactly what the term implies: manage risks. The term is best applied generically, as leaders are confronted by a variety of risks: training risks, fiscal risks, and safety risk. Safety risks management, however, is a specific type of risk management. This article is directed toward safety risk management and how it fits into the leader's tool bag.

### Risk Management in Theory

Risk management is a five-step cyclic process that is easily integrated into the decision-making process outlined in FM 101-5: Staff Organization and Operations. The decision-making process is ingrained in military leaders and readily lends itself to safety risk management as a separate consideration. Let's put it into a process that leaders understand.

A risk assessment is a part of risk management. It can range from simple to complex. A risk assessment causes leaders to identify hazards and threats and place them in perspective relative to the mission or task at hand. Logically, one cannot identify the risk without first determining what the hazards are.

### Risk Management Applied

① The first step in risk management is to *identify hazards*. The hazards are the potential sources of danger that could be encountered while performing a task or mission. For

example, a unit is given a mission to transport passengers and documents over open seas. Factors that determine hazards are weather, time of flight, terrain, equipment, and training of personnel. There could be other less obvious hazards that would become apparent during planning. Leaders seek to identify all these hazards before the operation.

② The second step is to *assess the hazards* to determine their cumulative effect on the mission or objective. Each of the hazards is analyzed to determine the probability of its causing a problem and the severity of the consequences should such a problem occur. Exercising judgement on how to eliminate or reduce hazards to lessen the overall risk is inherent in the risk assessment that describes the impact of the combined hazards. The result is a statement that qualifies the risk associated with the operation; high, medium, or low.

③ The third step is to *make a risk decision*. Leaders are expected to weigh the risk against the benefits of performing an operation; however, the mentality is more often mission-first. Keep in mind that unnecessary risk can be just as great a hindrance to mission accomplishment as enemy action.

Risk decisions are made at a level of command that corresponds to the degree of risk. As such, guidance should be established as to who makes which risk decisions. For example, high-risk platoon actions may be elevated to the company commander for acceptance or denial. A brigade commander may direct that company-level risk decisions

continued on page 6 ▶

# INTEGRATED UNIT SIMULATION SYSTEM

*Editor's note: The following was extracted from the briefings, Modeling and Simulation of the Soldier as a System. These briefings were presented to the 60th Symposium of the Military Operations Research Society: Contingency Operations in a New World Order, Naval Postgraduate School, Monterey, California, 23-25 June 1992. These briefings describe current analytical initiatives being performed by the concepts Analysis Division, Advanced Systems Directorate of the US Army Natick Research, Development, and Engineering Center, and their contractor: Simulation Technologies, Inc., in support of the Soldier as a System.*



The US Army Natick Research Development and Engineering Center (Natick), supported by Simulation Technologies, Inc. (STI), is currently developing the Integrated Unit Simulation System (IUSS) to provide a comprehensive analysis environment for the evaluation of Soldier Systems' survivability and effectiveness. The focus of the effort is individual performance within the context of small unit (squad or platoon) mission tasking. The IUSS is initially intended for the assessment of proposed or projected equipment for the individual soldier, although transition is planned to a wide variety of other applications, including training and exercise production, development of operational aids and wargaming support.

The IUSS architecture permits estimation of individual and unit capability for a broad spectrum of applications, through modular substitution of a wide range of battlefield threat representations, acting in concert with models of soldier equipment (and soldiers' performance with that equipment). For a given analysis, each of these factors will be coordinated as part of a simulation of the battlefield environment and specification of unit missions and force composition. By focusing on Soldier Systems' survivability and operability, the IUSS can demonstrate the benefits to be derived from current and evolving equipment technologies, providing a cost-effective tool to examine issues relating to equipment integration and synergisms.

The IUSS focuses on the fundamental relationship between a soldier's psychophysiological state and the ability to perform discrete mission tasks. Defining module data interfaces in terms of this relationship allows the IUSS to deal with each module in terms of its

effects on an underlying data structure - the Soldier System. This facilitates aggregation of effects to unit-level measures of effectiveness, and allows estimation of mission performance and associated costs.

The IUSS methodology does not impose any specific format for the soldier capability data structure, although it does require consistency within the elements of a particular analysis scenario. The number and exact definition of the abilities comprising the capability data structure components can thus be adjusted to fit the needs of a given analysis: the sensitivity of the performance models employed, the availability of supporting data, the types of tasks and the equipment factors to be studied, and the resolution and fidelity of analysis required.

## Points of Contact

### US Army Natick Research, Development, and Engineering Center

Natick, MA 01760-5011

Mr. Dale Malabarba  
Chief, Concepts Analysis Division  
Advanced Systems Directorate  
DSN: 256-4940  
Com: (508) 651-4940

Mr. John O'Keefe, IV  
Operations Research Analyst, Concepts  
Analysis Division  
Analysis Systems Directorate  
DSN: 256-4881  
Com: (508) 651-4881

**Simulation Technologies, Inc.**  
111 West First Street, Suite 748  
Dayton, Ohio 45402  
(513) 461-4608

Mr. Robert McIntyre, III  
Mr. Victor E. Middleton

# ANNOUNCING FY93 MANPRINT TRAINING SCHEDULE

Our FY93 MANPRINT Training schedule was approved at the annual MANPRINT Training Steering Committee Meeting in May 1992. Attendees should contact their installation training office to enroll as soon as possible.

The Deputy Chief of Staff for Personnel Integration, U.S. Total Army Personnel Command, is the proponent for MANPRINT training. MANPRINT training is conducted by the U.S. Army Logistics Management College, Fort Lee, Virginia. We offer MANPRINT for Managers Courses (2 days) and MANPRINT for Action Officers (9 days) Courses. Senior Leader Seminars (2 hours) will also be available upon request.

The purpose of the MANPRINT ACTION OFFICERS COURSE (MAOC) is to train officers, warrant officers, noncommissioned officers and civilian personnel to perform duties as action officers responsible for integrating MANPRINT considerations into the system development and acquisition process. The course is 9 days in length. An officer skill 6S is awarded to CPTs, MAJs, and LTCs upon successful completion of the course.

## MANPRINT ACTION OFFICER COURSES

<u>CLASS NO.</u>	<u>DATES</u>	<u>LOCATION</u>
93-001	05 OCT - 16 OCT 92	AVN LOG SCH, FT EUSTIS, VA
93-002	19 OCT - 30 OCT 92	CECOM, FT MONMOUTH, NJ
93-003	30 NOV - 10 DEC 92	MICOM, HUNTSVILLE, AL
93-004	05 JAN - 15 JAN 93	JFK WARFARE CTR, FT BRAGG, NC
93-005	26 JAN - 05 FEB 93	MRSA, LEXINGTON, KY
93-006	23 FEB - 05 MAR 93	ENG SCHOOL, FT LEONARD, MO
93-007	15 MAR - 25 MAR 93	FA SCHOOL, FT SILL, OK
93-008	29 MAR - 08 APR 93	CECOM, FT MONMOUTH, NJ
93-009	03 MAY - 13 MAY 93	SIGNAL CTR, FT GORDON, GA
93-010	08 JUN - 18 JUN 93	PEO STAMIS, FT BELVOIR, VA
93-011	12 JUL - 22 JUL 93	INF SYS CMD, FT HUACHUCA, AZ
93-012	09 AUG - 19 AUG 93	TACOM, WARREN, MI
93-013	13 SEP - 23 SEP 93	ADA SCHOOL, FT BLISS, TX

The MANPRINT FOR MANAGERS COURSE (MFM) is designed to provide training to mid-level managers in Army organizations with MANPRINT missions and functions in order to facilitate the accomplishment of MANPRINT program goals. The course provides highly interactive instruction on MANPRINT and its background, philosophy, purpose and domains in 2 days.

✓ MANPRINT FOR MANAGERS COURSE

<u>CLASS NO.</u>	<u>DATES</u>	<u>LOCATION</u>
93-001	29 OCT - 30 OCT 92	CECOM, FT MONMOUTH, NJ
93-002	18 NOV - 19 NOV 92	AVN LOG, FT EUSTIS, VA
93-003	10 DEC - 11 DEC 92	MICOM, HUNTSVILLE, AL
93-004	25 MAR - 26 MAR 93	FA SCHOOL, FT SILL, OK
93-005	08 APR - 09 APR 93	CECOM, FT MONMOUTH, NJ
93-006	21 APR - 22 APR 93	RESIDENT, FT LEE, VA
93-007	13 MAY - 14 MAY 93	SIGNAL CTR, FT GORDON, GA
93-008	26 MAY - 27 MAY 93	ADA SCHOOL, FT BLISS, TX
93-009	30 JUN - 01 JUL 93	SAFETY CTR, FT RUCKER, AL
93-010	22 JUL - 23 JUL 93	INF SYS CMD, FT HUACHUCA, AZ
93-011	19 AUG - 20 AUG 93	TACOM, WARREN, MI
93-012	23 SEP - 24 SEP 93	TBD

**MANPRINT FOR SENIOR LEADERS SEMINAR**

MANPRINT FOR SENIOR LEADERS SEMINAR is a two-hour seminar designed to give General Officers and Senior Executive Service personnel an overview of MANPRINT. The Senior Leaders Seminar will be available upon request.

For more information about these courses, or to enroll in one, contact the following:

**Enrollment procedures:**

Ft. Lee, VA: DSN 539-4057  
COM (804) 7865-4057

**Information and other assistance:**

Major Hoopengardner: DSN 221-3706  
COM (703) 325-3706  
Mr. Dykhuis: DSN 221-2098  
COM (703) 325-2098

**Risk Assessment (continued)**

be made by the company commander if the risk is low, battalion commander if the risk is medium, and brigade commander if the risk is high. In the case of battalion-level decisions, the chain may go from battalion to brigade to division.

① Step four is to *implement the controls established* as a result of steps one through three. Included in this step is leader action to reduce or eliminate hazards. Controls may be as substantial as writing an SOP or conducting a short safety briefing. In the overwater mission scenario, the leader would provide the crew a mission briefing on the specifics of what he has decided. He would then require a briefback from the crew to ensure that all is understood.

② Step five is to *supervise*. However, supervision in this sense goes beyond ensuring that people do what is expected of them. It includes following up during and after an action to ensure that all went according to plan, reevaluating the plan or making adjustments as required to accommodate unforeseen issues, and incorporating lessons learned for future use.

For more information call LTC Kurt Pierce, Prevention Programs Division, DSN 558-2118, COM 205-255-2118

Look for a follow-up article in future issues.

## The Defense Technical Information Center

Gretchen Eberhard

The Defense Technical Information Center (DTIC) is a component of the Department of Defense (DOD) Scientific and Technical Information Program (STIP). DTIC is a central point within the DoD community for acquiring, retrieving, and disseminating scientific and technical information. DTIC holdings include technical reports; management information summaries of program planning, work unit, and independent research efforts; and special collections such as a referral database, World War II documents, and DoD sponsored patents and patent applications.

Four major DTIC databases can be searched: the Technical Report (TR) Bibliographic Database, the R&T Work Unit Information System (WUIS) Database, the Independent Research and Development (IR&D) Database, and the Manpower and Training Research Information System (MATRIS) Database. The TR Database is a collection of bibliographic citations of documents that convey results of Defense sponsored Research, Development, Test, and Evaluation efforts. The WUIS Database is a collection of DoD sponsored technically oriented research and technology effort summaries of the work unit level. The IR&D Database describes technical programs which were initiated and performed by DoD contractors, but were not wholly funded by DoD.

The MATRIS Database was created to support the technical information needs of the Manpower, Personnel, and Training (MPT) R&D community. This database, located in San Diego, CA, provides information about planned, ongoing, and recently completed DoD research within the technology areas of manpower and personnel, human factors, education and training, and simulation and training devices.

Services can be utilized through requests for searches or through on-line access to the DTIC databases. Some information may be classified and therefore unavailable to facilities without the proper clearances. Registration for use of the service is offered to the DoD community and its contractors and can be obtained free of charge. Charges are levied for duplication of reports and for on-line access based on time usages. For more information on registration procedures, call DTICs Registration and Services Section at COM (703) 274-6871 or AV 284-6871.

The following is a list of MANPRINT materials/documentation available through DTICs Technical Report Bibliographic Database including the document number for ordering purposes.

Automated HFE/MANPRINT Idea User's Guide AD-B157

Documentation Management and Technical Support for Acquisition Strategies, Test and Evaluation Master Plans, and System Power and Personnel Integration (MANPRINT) Management Plans AD-B128 032L

AUSA Briefing: MANPRINT (Manpower and Personnel Integration) AD-B101 336

MANPRINT Reference Retrieval System (User's Guide) AD-A239 915

Generic MANPRINT Analysis: Methodology to Incorporate Human Factors Variables into Army Combat Models AD-A239 906

Simulation Networking: A MANPRINT Tool AD-A238 810

Handbook for Conducting Analysis of the Manpower, Personnel, and Training Elements for a MANPRINT Assessment AD-A235 430

MANPRINT Analysis Methodology: Victory Through Design AD-A230 494

Incorporating Operator Workload Issues and Concerns into the System Acquisition Process: A Pamphlet for Army Managers AD-A228 489

MANPRINT/Systems Safety Interface AD-A228 290

MANPRINT Handbook for RFP Development AD-A228 035

MANPRINT Practitioners Guide AD-A227 434

MANPRINT Handbook for Nondevelopmental Item (NDI) Acquisition AD-A227 033

Manpower and Personnel Integration (MANPRINT): Some Preliminary Observations and Lessons Learned AD-A219 971

MANPRINT Methods Monograph: Aiding the Development of Training Constraints AD-A215 636

MANPRINT Methods Monograph: Aiding the Development of Manned System Performance Criteria AD-A213 543

MANPRINT Methods Monograph: Aiding the Development of Manpower-Based System Evaluation AD-A213 484

Making MANPRINT Count in the Acquisition Process AD-A210 531

Catalogue of MANPRINT Methods AD-A208 236

Design of a MANPRINT Tool for Predicting Personnel and Training Characteristics Implied by System Design AD-A205 201

Detailed Design Specification for Product Three - Significant Soldier Characteristics AD-A205 436

Integration of MANPRINT and RAM (Reliability, Availability, and Maintainability): A Marriage of Man and Machine on System Performance Modeling AD-A205 064

MANPRINT in the Source Selection Process AD-A193 742

Modern MANPRINT Instrumentation AD-A192 778

MANPRINT Risk Assessment AD-A185 995

MANPRINT On-Line AD-A182 283

The System MANPRINT Management Plan (SMMP) AD-A171 130

To order any of these documents or to obtain more information on these documents or any other services provided by DTIC call (703) 274-6867. In the next MANPRINT Bulletin issue, keep an eye out for more documentation available through DTIC specifically related to MANPRINT efforts in various acquisition programs.



**HUGHES AIRCRAFT COMPANY'S GROUND  
SYSTEMS GROUP  
COMMITTS TO MANPRINT!**

Hughes Aircraft Company has made a formal commitment to the U.S. Army MANPRINT program. Graduating class 007-92 of the MANPRINT Action Officers Course at ALMC; Fort Lee, Virginia included a member of the Logistics Systems Engineering Department of Ground Systems Group, Fullerton, California. That MANPRINT engineer is currently working with the individual Hughes MANPRINT managers to coordinate the MANPRINT activities of previously awarded Hughes/Army contracts. Hughes has submitted proposals on additional U.S. Army programs that are pending contract award and all contain MANPRINT requirements.

A second engineer from the same department is scheduled to attend the MANPRINT Action Officers Course to be conducted at Fort Monmouth, New Jersey at the end of July 1992. As new contracts are awarded, and MANPRINT requirements increase, additional personnel will be sent to the MANPRINT Action Officers Course. This will allow the Hughes MANPRINT Engineering Group to grow in size, knowledge, and expertise.

The MANPRINT Engineering Group members and candidates are former technicians from various military services with strong Integrated Logistic Support backgrounds. They readily recognize the requirements and needs of the soldier, both operator and maintainer. They truly "Remember the Soldier".

In addition to initiating a MANPRINT Engineering Group, the department manager has authorized a comprehensive MANPRINT library. The library has been assembled and made available for immediate use. Although a number of publications from the various MANPRINT domains have been acquired, the core of the library is based on the "MANPRINT Related Publications Available from DTIC" listing as published in the January/February 1992 issue of the MANPRINT BULLETIN. The MANPRINT library will continue to grow as additional MANPRINT-related publications are made available.

Hughes Aircraft Company, Ground Systems Group has always adhered to the policies of the various individual MANPRINT domains but the MANPRINT Engineering Group will now be able to coordinate those policies and efforts through the focus on the formal MANPRINT discipline.

Anyone interested in the Hughes MANPRINT Engineering Group may direct questions or ideas to either Mr. Wayne Hawkins at (714) 732-7588 or Mr. Irv Trinkle at (714) 441-7197.

***A Note from the Editor...***

**Thanks for your response to the Readership Survey!!**

We received a lot of helpful and insightful feedback from all of you who took the time to respond. We have already implemented some of your suggestions. You will continue to see many changes over the next few issues, including a new format for the new year. But that doesn't mean we don't want to hear from you anymore. If you have any more ideas or comments, use the Reader's Response form in the Bulletin. We really do take the time to read all your comments and want to make the Bulletin interesting and useful to you.

So thanks again for your response and please continue to write to us with your suggestions and questions.

- Susan Culkin  
Editor