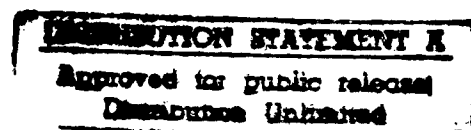


**Recent ARI Manpower, Personnel
and Training Research Products
With Transfer Potential to
Operational Army Units
and Organizations**

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U.S. Army Research Institute for the Behavioral and Social Sciences

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**RECENT ARI MANPOWER, PERSONNEL AND TRAINING
RESEARCH PRODUCTS WITH TRANSFER POTENTIAL TO
OPERATIONAL ARMY UNITS AND ORGANIZATIONS**



Kurt Langenwalter
Editor

ARI Special Report 25
July 1996

FOREWORD

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) routinely does research on behalf of an Army sponsor, often producing a product that ARI turns over to that sponsor. Over the past year we at ARI have increasingly been polled by operational units and organizations for information and products that would be helpful in their mission accomplishment. This report publishes a collection of information papers describing products that ARI has developed that we feel may be useful to units and organizations other than the sponsor.

For assistance in obtaining and using research products described in this report as well as other ARI technical services, contact one of the two ARI field representatives listed below; both are assigned to work directly with operational units and organizations. Alternately, contact directly the ARI points of contact for the research products of interest.

Dr. Richard E. Christ, (817) 286-6946 or DSN 566-6946; Fax (817) 287-9873 or DSN 737-9873; e-mail to CHRIST@ari.fed.us. Address: Commander, 4ID, ATTN: AFZC-ARI, EXFOR Coordination Cell, Fort Hood, TX 76544-5200

Dr. Halim Ozkaptan, 011-49-6221-577197 or DSN 370-7197, Fax 011-49-6221-578807 or DSN 370-8807; e-mail to OZKAPTANH@hq.hqusareur.army.mil. Address: HQ USAREUR & 7th Army, ATTN: U.S. Army Research Institute SCO (PERI-IH), Unit 29351, APO AE 09014

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(Science and Technology)

EDGAR M. JOHNSON
Director

RECENT ARI MANPOWER, PERSONNEL AND TRAINING RESEARCH PRODUCTS WITH TRANSFER POTENTIAL TO OPERATIONAL ARMY UNITS AND ORGANIZATIONS

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JOINT AND MULTI-SERVICE DISTRIBUTED TRAINING TESTBED CLOSE AIR SUPPORT TRAINING EXERCISE (JMDT2 CAS TX)

1. Purpose: To train a brigade or battalion task force command group and key staff members in the tactics, techniques, and procedures for Close Air Support (CAS) operations. The product describes documentation that includes scenarios, training objectives, tasks, and assessment tools for a CAS training exercise. There also is a set of recommendations about how to implement CAS training in a Distributed Interactive Simulation (DIS) environment. Recommendations are provided to train both the execution of CAS and its integration/synchronization with ground force maneuver and fires. The training R&D was supported by a consortium from OSD and the services.

2. Facts:

a. The Joint and Multi-Service Distributed Training Testbed seeks to develop methods and tools for training combat operations through the use of simulations and simulators. It concentrates on developing improved training, including meaningful feedback to trainees in the form of After Action Reviews (AARs). The emphasis is on inter-service coordination skills needed to successfully perform CAS.

b. To date, two 5-day sets of CAS training exercises were conducted, one in May 1994 and the other in February 1995. Simulations and simulators of all four services were linked over the Defense Simulation Internet. The major Army players for the most recent exercise were the command group and key staff members of 3-67 Armor, 2AD. Commander, 3-67 Armor stated at the conclusion of the training week that the exercise was extremely worthwhile and that he would like to do it again.

c. CAS training was successfully accomplished during both sets of exercises, with measurably improved performance by trainees. Methods for systematically deriving joint/multi-service training objectives, developing effective performance measurement tools, constructing realistic scenarios, and conducting productive AARs over video-teleconference were validated.

d. The available product is CAS documentation about tactics, techniques, and procedures needed to enhance any program of training for inter-service coordination. However, an exercise environment for multi-service training must be set up for optimum benefits. This requires scheduling and linking air and ground simulations and simulators using DIS technology.

3. Point of Contact: Dr. Frank Moses, U.S. Army Research Institute, Alexandria, VA, Advanced Training Methods Research Unit, (703) 617-5948, DSN 767-5948.

FIRE SUPPORT TRAINING

1. Purpose: To facilitate training, performance assessment, and after action reviews (AARs) for joint fire support operations. A detailed analysis of the fire support mission at battalion through corps is due for completion during early 1996. The analysis uses functions to describe the inter- and intra-Battlefield Operating Systems (BOS) relationships in which a unit must be engaged if it is to successfully accomplish its battlefield missions with doctrinally correct tactics, techniques, and procedures. This analysis can help to focus training, assessment, and AARs.

2. Facts:

a. There are 39 BOS subfunctions called Critical Combat Functions (CCFs) for research purposes. Task analyses of these are in various stages of completion for different echelons. CCF 15 describes Integration and Synchronization of Fire Support—what a unit must accomplish under varying METT-T to synchronize fires and combined arms effects on the battlefield. The analysis of CCF 15 is completed at the battalion task force level and is nearing completion at the brigade level. The analysis for division and corps will be completed by March 1996 by a consortium of retired generals consisting of LTG Pete Taylor (USA), former III Corps Commander; LTG Tom Fields (USA), former DCINCPAC; MG Burt Moore (USAF), J-3 for Desert Storm; and BG Bill Mullen, BDM CCF Project Director. In September 1995 this consortium met with and received recommendations for improving the draft division and corps CCF 15 from the following active duty subject matter experts: the DCG, III Corps; CG, III Corp Arty; AFSCOORDs from 1st Cav, 2AD, and 4th Mech; Cmdr, 6th Cav; and III Corps G-3

b. CCFs identify outcomes, tasks, participants, information requirements, processes, and inter- and intra-echelon linkages, as well as inter- and intra-BOS relationships common to the execution of combat missions. This functional approach is particularly useful in refining training objectives because it focuses on what a unit does to accomplish one or more CCFs. It is reasonable to expect that CCF 15 (or the FS BOS subfunction) will be relevant to the EXFOR. It is also reasonable to expect that the outcomes required by a unit performing the function will not be significantly different for conventional analogue forces and the EXFOR. It is possible that tasks or the participants who perform them will change due to EXFOR changes to equipment or organization. Thus it should be possible for the EXFOR to quickly tailor the CCF task analyses.

c. Use of CCFs to focus training and performance measurements provides a more detailed and systematic method than use of BOS alone, and can greatly enhance meaningful feedback during AARs. The only cost involved would be the time spent by the appropriate training staff to modify the CCF products to their specific training needs.

3. Point of Contact: Dr. Frank Moses, U.S. Army Research Institute, Advanced Training Methods Research Unit, DSN 767-5948 or COMM (703) 617-5948.

PLATOON COHESION AND MOTIVATION MEASURE

1. Purpose: To provide a measure of platoon cohesion, motivation, and leadership that may be useful to company or platoon leaders.

2. Facts:

a. The measure is a one page, 12-item questionnaire that is given to all platoon members, including leaders. The questionnaire is scored partially by the members and partially by those giving out the questionnaire. The questionnaire takes about 5 minutes to hand out, complete, and turn in. Space is available on the questionnaire for platoon members to add comments or respond to additional verbal questions they are given.

b. The questionnaire consists of three sections of four questions each. The sections address personal job motivation, squad member cohesion, and platoon leadership team cohesion. Scores on these sections have related strongly to platoon performance on field training exercises and at Army Combat Training Centers and relate as well to a platoon's ability to withstand stress. A three-page guide is available that gives instructions for administering, scoring, and interpreting the results of the questionnaire.

c. While the guide provides score standards for combat infantry platoons, the standards have not yet been validated specifically for support or service support platoons. Further, validation of the measures occurred using Army civilian scientists rather than a unit's own personnel to administer and score the questionnaires. Thus, it is possible that the use of a unit's own personnel may influence questionnaire results, even though no names or other personal identifiers are used.

3. Point of Contact: Dr. Guy L. Siebold, U.S. Army Research Institute, Organizational and Personnel Resources Research Unit, (703) 617-9708 or DSN 767-9708.

SUPPORTING FAMILIES DURING OVERSEAS DEPLOYMENTS

1. Purpose: To describe the Army Research Institute's (ARI) new manual for supporting families during deployments.

2. Facts:

a. ARI has recently completed a review of "lessons learned" about family support operations during Army deployments over the past 15 years. This review has been published under the title *How to Support Families During Overseas Deployments: A Sourcebook for Service Providers*. The primary audience for the report is individuals who operate family support programs at the installation level and below. Intended readers include: Army Community Service directors, battalion commanders, chaplains, Family Support Group leaders, senior military spouses, and individuals who train Family Support Group leaders. The report also discusses some issues (e.g., the desirability of further professionalization of family support operations) that would be of interest to policy makers.

b. The report includes "lessons learned" from Army family support operations from 1980 to the present, including The Multinational Force and Observers in the Sinai, Operation Just Cause in Panama, Operations Desert Shield and Desert Storm in Saudi Arabia, Operation Restore Hope in Somalia, and Caminos Fuertes (Strong Roads) in Central America. The report discusses how family support mechanisms work at three levels: the installation, the battalion or company size unit, and the family unit itself. Specific support mechanism that are explored include: Family Support Groups, Rear Detachments, the leadership and staff of the unit itself, Family Assistance Centers, financial and legal assistance, the local civilian community, family briefings, unit newsletters, and soldier-family communications. The report also contains three appendixes: (1) a list of family support resource materials (e.g., handbooks, pamphlets, program descriptions, and relevant Army regulations), (2) a discussion of how to handle families that do not cope well with deployments, and (3) a listing of research reports that have been generated during this period.

c. Early versions of the report were used by USAREUR and other major commands to help guide family support operations in Operation Joint Endeavor in Bosnia and surrounding countries. Over 10,000 copies of the printed version of the report have been distributed to family support agencies and interested parties in the Army, Navy, Air Force, and Marine corps. This report is available for downloading from ARI's Home Page on the internet at: <http://www.ari.fed.us/source.htm>.

3. Points of Contact: Dr. Bruce Bell, U.S. Army Research Institute, Organizational and Personnel Resources Research Unit, (703) 617-8867 or DSN 767-8867; LTC Malstrum, OASD (FMP) (PSFE), DSN 227-7191.

WHAT WE KNOW ABOUT ARMY FAMILIES

1. Purpose: To provide useful information for family support operations.

2. Facts:

a. This ARI report summarizes over 70 scientific manuscripts and reports that describe how Army life affects its families and how the families influence soldier retention as well as soldier and unit readiness. Of particular interest here is the discussion of the implication of these findings for supervisors, unit leaders, installation commanders, and Department of the Army policy makers.

b. This product is available now.

c. Examples of the people who would find these materials useful include: company and battalion commanders, chaplains, mental health professionals, installation directors of Army Community Service programs, and the individuals who train Rear Detachment commanders and Family Support Group leaders.

d. This report can be reproduced locally and used as is without additional staff or other resources.

3. Point of Contact: Dr. Bruce Bell, U.S. Army Research Institute, Organizational and Personnel Resources Research Unit, (703) 617-8867 or DSN 767-8867.

DEVICE-BASED PREDICTION OF LIVE-FIRE TANK GUNNERY PERFORMANCE

1. Purpose: To predict the probability of first-run Table VIII qualification for tank crews.

2. Facts:

a. Performance on a 60- to 90-minute, COFT (Conduct-of-Fire Trainer) -based test of gunnery proficiency was used to develop and validate a tool for making quick and accurate predictions of tank crew chances for successful live-fire Table VIII qualification on the first run down range.

b. The prediction tool can be used by company-level trainers to (1) identify when proficiency on COFT is sufficient to warrant the transition from device to live-fire gunnery, and (2) assess individual tank crew readiness for live-fire gunnery before arrival on the range, thereby maximizing the payoff from each crew's live-fire experience while conserving costly main-gun tank ammunition in the process.

3. Point of Contact: Dr. Joe Hagman, U.S. Army Research Institute, Reserve Component Training Research Unit, Boise, ID, (208) 334-9390. Sponsor: LTC R. Krug Manager - Project SIMITAR, (703) 284-8853.

UNIT CLIMATE PROFILE

1. Purpose: To provide commanders an assessment of a unit's overall morale, and reliable and valid information about unit climate factors. It is not just another questionnaire. It is a scientifically developed tool that has undergone successive refinements and validation. It addresses a wide range of issues related to individual satisfaction and organizational climate relative to the unit, supervisors, coworkers, and the job. Specific items range from such considerations as leadership, training, and equipment to communication, goals, rewards, and corrective actions. All responses are confidential. The results of the survey are given only to the specific unit's leader. It is viewed as a leadership tool to enhance unit effectiveness.

2. Facts:

a. There are four separate instruments relative to the military grade structure. The type and number of questions vary relative to these levels.

Unit Climate Profile	E1 - E4
Unit Climate Profile	E5 - E6
Leadership Climate Profile	E7 - E8
Leadership Climate Profile	Battalion, Brigade and Division Leaders

b. The Unit Climate Profile is currently being used by V Corps in USAREUR. It is administered by the Operations Office, Office of the Inspector General, H.Q. V CORPS on a yearly basis to all V CORPS units. Historical trends are monitored. The soldier or unit are not identified in the historical data.

c. A 3- to 4-person enlisted staff manages the program. Each questionnaire takes about 45 minutes to complete. Answers are marked on a "mark sense form" with a #2 pencil. The mark sense forms are scanned and simple statistical programs are used to compile and graph the data with normal desk top computers.

3. Point of Contact: Dr. Hal Ozkaptan, U.S. Army Research Institute, USAREUR Scientific Research Office, DSN 370-7197 or 011-49-6221-578807.

THERMAL TRAINING PROGRAM

1. Purpose: To train soldiers on thermal target detection and identification skills.

2. Facts:

a. Currently, there is no program that trains soldiers on detecting, recognizing, and identifying targets using thermal sensors. These training deficiencies have contributed to failures to detect targets as well as fratricide. The Thermal Training Program will train soldiers who use currently fielded thermal sights as well as future 2nd-generation sights. The program uses digitized thermal imagery of both U.S. and foreign vehicles. The imagery contains moving and stationary vehicles at different ranges and aspect angles, and vehicles under fully exposed and degraded conditions. The software is Windows based and menu driven. Soldiers can use the software with minimal guidance from unit trainers and can progress at their own rate. Soldier proficiency is maintained, stored, and assessed.

b. The training program will be available by May 1996 and will be the first version of the program. As the program is refined and improved through research conducted in FY96 and FY97, upgraded CD-ROMs can be provided at cost.

c. The training program software is delivered on a CD-ROM. The program requires a multimedia 75 MHz Pentium computer with 8 MB RAM, 1.06 GB hard drive, SVGA monitor, keyboard, mouse, and CD-ROM reader. Estimated cost of this computer configuration is \$2,000. An instructional guide accompanies the program. The CD-ROM software is available at cost.

3. Point of Contact: Dr. Jean L. Dyer, U.S. Army Research Institute, Infantry Forces Research Unit, Fort Benning, GA 31905, DSN 835-5589.

ARMY AIRCREW COORDINATION EXPORTABLE TRAINING PACKAGE

1. Purpose: To reduce error patterns frequently associated with aviation accidents.

2. Facts:

a. Aviation accidents have been a persistent problem for Army aviation units. Research has shown that many of these accidents are caused by a lack of well-defined coordination of activities and actions in the cockpit on the part of aircrews.

b. The U.S. Army Research Institute, in conjunction with the Aviation Center, developed a comprehensive program to define the skills, abilities, and knowledge required to transition operational aircrews into effective, well-coordinated crews. These skills have been found to translate into a reduction in crew error patterns frequently associated with accidents.

c. A training program was developed, The Aircrew Exportable Training Package, that can be directly applied by unit instructor pilots. The package consists of two volumes: *Volume 1: Exportable Training Package Instructor Guide* and *Volume 2: Exportable Training Package Reference Book*.

d. The program has been accepted by the U.S. Army Aviation Center (USAAVNC), and the training concepts are being incorporated within the Initial Entry Rotary Wing and Aircrew Qualification Courses at USAAVNC. The Aircrew Exportable Training Package allows the unit commander to take advantage of the success of this program by providing timely and effective crew coordination training within the aviation unit.

e. Resource Requirements: None, aside from instructor pilots. Aircrew Exportable Training Package materials are available from ARI Rotary Wing Research Unit, Fort Rucker, AL, or Aviation Training Brigade, Fort Rucker, AL.

f. ARI further development required: None. The Aircrew Exportable Training Package is available today.

3. Point of Contact: Mr. Charles A. Gainer, Chief, ARI-RWARU, Fort Rucker, AL, (334) 255-2834, DSN 558-2834.

VARWARS GROUP PROBLEM SOLVING EXERCISE

1. Purpose: The goal of the problem solving exercise is to have teams concurrently solve their subproblems and to have the individual or team solutions compose an integrated whole. Skills that are emphasized in the exercise include information sharing, time management, meeting management, coordination, decision making, planning, estimation, and preparation and delivery of briefings.

2. Facts:

a. VARWARS is a group problem solving exercise that has been conducted using 7- and 10-person groups. The group divides into a leader and three teams: budget, personnel, and training. The teams work interdependently on a nontactical planning and resource allocation problem. Exercise duration ranges from 3 to 5 hours. The VARWARS exercise has been part of the curriculum at the Combined Arms and Services Staff School (CAS3) since 1987.

b. Performance in the exercise is scored using a computer program. The score measures the quality of the group's final solution. Normative data are available reflecting means and standard deviations of groups composed of U.S. Army captains.

c. Administration of the problem requires the instruction forms to be provided to the group and a computer to execute the scoring program. Additional support for administration of the exercise, evaluation of the group process and product, and development of feedback for an after-action review is provided in the CAS3 instructor notes to the exercise. There are no other resource requirements.

d. The target audience is a mixed branch group of captains as is found at CAS3. However, it has been used with groups of DoD civilians and Army lieutenant colonels. VARWARS will be used in research with groups of senior enlisted personnel in 1996.

3. Points of Contact: Dr. James Lussier, DSN 552-9769 or (913) 684-9769, U.S. Army Research Institute, Fort Leavenworth Research Unit, Fort Leavenworth, KS. POC for Army proponent is LTC Frank Wilmoth at DSN 552-5611 or (913) 684-5611.

PRACTICAL THINKING INSTRUCTION FOR BATTLE COMMAND AND STAFF PLANNING

1. Purpose: Practical Thinking is a module of instruction that helps to develop a leader's critical and creative thinking skills. These skills are increasingly recognized as key for tactical planning and for capitalizing on emerging technologies.

2. Facts:

a. Practical Thinking was developed by the U.S. Army Research Institute (ARI) to help Army leaders enrich their thinking, reasoning, and decision making. The instruction is focused on the cognitive and conceptual skills required for Battle Command. It was tested in a Command and General Staff Officer Course on Battle Command, where the students had a 12-percent gain in expertise on the topics covered.

b. Practical Thinking builds on how people naturally reason and decide. Instead of trying to get them to rely on better numerical estimates or to follow arbitrary rules, practical thinking aims to reinforce their use of what they already know, getting them to recognize what they do not, and to explore the possibilities of what they need to know. Topics include taking new perspectives and checking hidden assumptions of tactical situations. These lessons are also beneficial for considering how to adapt new information technologies to organizations and work procedures. Other lessons address how the commander and staff can adapt their thinking to specific situations, what they can do to handle unexpected events, and how to reason practically. Characteristics of expert tactical decision makers and complex, integrative thinkers are identified. The seminar-like course involves short readings, discussions, and practical exercises.

c. Resource requirements are minimal, involving only the reproduction of handouts. The curriculum is modifiable from 2 or 3 hours to over 20 hours depending on a unit's specific interests. Ideal class size is 10 to 15 personnel. ARI's preparation time depends on the degree of tailoring desired, but should not exceed one person-month. ARI or training unit personnel could lead the seminars. Lesson materials are available for review, have been tested, and can be tailored for focused applications.

3. Point of Contact: Dr. Jon Fallesen, U.S. Army Research Institute, Fort Leavenworth Research Unit, Fort Leavenworth, KS, (913) 684-4933 or DSN 552-9754.

SIMULATION-BASED MOUNTED BRIGADE TRAINING PROGRAM (SIMBART)

1. Purpose: To provide information on the SIMBART training research and development initiative and the possible export thereof.

2. Facts:

a. The SIMBART project builds upon products and methods developed under the Simulation-Based Multiechelon Training Program for Armor Units (SIMUTA) project to provide structured collective training exercises for primary brigade staff members. Complete training support packages (TSPs) have been developed for three missions: movement to contact, area defense, and deliberate attack. All three exercises were developed for execution on the National Training Center (NTC) terrain database, using the distributed Janus system (not the same as Janus (Army)) developed by the Advanced Research Projects Agency (ARPA).

b. As in SIMUTA, the focus of all SIMBART exercises is maneuver execution. Products were developed for "turnkey" implementation with an initial focus on Army National Guard (ARNG) brigade staffs. In the Virtual Training Program at Fort Knox, operations orders and other preexercise materials developed under SIMBART will be provided in advance to training units by a dedicated team of observer/controllers (O/Cs). These O/Cs monitor staff members' performance during execution of the orders provided, facilitate afteraction reviews, and provide a succinct take-home package (THP). Trained interactors play the roles of battalion personnel during SIMBART exercises, but actual battalion commanders and staff personnel may take part. However, the focus of the AARs is the information handling processes of the primary brigade staff.

c. The SIMBART program has been exported to ARNG sites in Idaho and Georgia having the ARPA Janus system. Available Reserve Training Detachment or other personnel serve as O/Cs and interactors at these locations. Implementation at other sites would require training of personnel to serve as O/Cs and interactors, along with modification of TSPs and simulation files to fit available Janus (Army) simulation capabilities. Modification of the program for a terrain database other than NTC or for digitized forces would require a relatively large effort.

3. Points of Contact: Dr. Billy Burnside, U.S. Army Research Institute, Armored Forces Research Unit, Fort Knox, KY, (502) 624-2613 or DSN 464-2613. Further information can be obtained from LTC Randy Williams, Special Assistant to the CG (ARNG), U.S. Army Armor Center, DSN 464-1315.

SIMULATION-BASED MULTIECHELON TRAINING PROGRAM FOR ARMOR UNITS (SIMUTA)

1. Purpose: To provide information on the SIMUTA training research and development initiative, and possible export thereof.

2. Facts:

a. The SIMUTA project was completed in December 1994, and the training support packages (TSPs) produced have been implemented in the Virtual Training Program (VTP) at Fort Knox, KY. These TSPs support structured training exercises for conventional armor, mechanized infantry, and scout platoons; armor company teams; and armor battalion task forces in Simulation Networking (SIMNET), and for primary battalion staff members in the distributed Janus system (not the same as Janus (Army)) developed by the Advanced Research Projects Agency. There are over 100 exercises in total.

b. The focus of all SIMUTA exercises is maneuver execution on the National Training Center (NTC) terrain database. Exercises have been developed for movement to contact and defense in sector missions. A follow-on effort to be completed by

April 1996 is developing TSPs for approximately 20 additional exercises (platoon through battalion) for the deliberate attack mission.

c. All SIMUTA products were developed for "turnkey" implementation with an initial focus on Army National Guard (ARNG) units. Operations orders and other preexercise materials developed under SIMUTA are provided in advance to training units by a dedicated team of VTP observer/controllers (O/Cs). These O/Cs monitor units' execution of the orders provided, facilitate frequent after action reviews, and provide a succinct take-home package.

d. Selected SIMUTA products have been implemented at ARNG sites in Idaho and Georgia. Implementation at other sites would require training of personnel to serve as O/Cs, acquisition of O/C workstations for SIMNET, and modification of TSPs and simulation files to fit available simulation capabilities. Modification of the program for a terrain database other than NTC or for digitized forces would require a relatively large effort.

3. Points of Contact: Dr. Billy Burnside, U.S. Army Research Institute, Armored Forces Research Unit, Fort Knox, KY, (502) 624-2613 or DSN 464-2613. Further information can be obtained from LTC Randy Williams, Special Assistant to the Commanding General (ARNG), U.S. Army Armor Center, DSN 464-1315.

COMBAT LEADERS' GUIDE

1. Purpose: The U.S. Army Research Institute (ARI) Combat Leaders' Guide (CLG) project was initially funded in 1985 by the TRADOC Training Technology Agency as an adjunct to ongoing research. The goal was to produce a standardized job performance aid for leaders' use during periods of high stress and fatigue in continuous combat operations and during realistic combat training. The additional intent was to overcome the effects of procedural decay over time by providing a memory jogger for trained soldiers.

2. Facts:

a. The CLG is a pocket-sized handbook containing critical tasks from soldiers' manuals and other training materials in an easy-to-read checklist format, on water- and tear-resistant paper. Fastened with rings for quick insertion or deletion of material, it provides fast information retrieval, can be personalized to individual and unit needs, and is usable under low light and in inclement weather. The CLG is a generic guide and requires little updating. The CLG has shown its utility in supporting unit readiness by providing company grade leaders and below with doctrinal, tactical, and technical materials in a quick reference format. The CLG offers potential for increased operational capability by supporting maintenance of leader readiness.

b. The original CLG, *Combat Leaders' Guide: Rifle Platoon and Squad*, was printed as a test item in 1986; a second edition, *Combat Leaders' Guide: Platoon Leaders, Platoon Sergeants and Squad Leaders*, was printed in 1987 and reprinted in 1990. Based on feedback from soldiers deploying to Operation Desert Storm, an updated version, *Combat Leaders Guide: Leader Handbook*, was printed in 1992 and reprinted in 1993. The CLG was revised as *Combat Leaders' Guide: Leader Handbook 1994* and printed by the Special Assistant to the Commanding General, Army National Guard (ARNG), Fort Benning, for ARNG infantry battalions.

c. Over 40,000 prototype CLGs have been distributed worldwide to Active and Reserve Component military personnel. User feedback has been overwhelmingly supportive, as evidenced by continuing individual and unit requests. The CLG has been used in classrooms, during FTXs and unit evaluations, at the Combat Training Centers, and during Desert Shield/Storm. Because the CLG is a prototype item and not a part of the doctrinal literature program, its availability is limited. ARI will work with units by providing samples, specifications, and camera-ready materials, as local reproduction is both authorized and encouraged.

3. Point of Contact: Marnie Salter, U.S. Army Research Institute, Infantry Forces Research Unit, Fort Benning, GA, (706) 545-5589 or DSN 835-5589.

BATTLE STAFF TRAINING SYSTEM

1. Purpose: The Battle Staff Training System (BSTS) for maneuver battalion and brigade staffs trains individual staff skills through a multimedia approach using computer-based instruction complemented by text-based materials. The need for staff functional area training was reported in a U.S. Army Research Institute (ARI) book, *Determinants of Effective Unit Performance* (1994). Based on success of an interim job aid, *The Commander's Battle Staff Handbook*, the Advanced Research Projects Agency (ARPA) supported development of the prototype BSTS for experimental application in the National Guard under the program Simulation in Training for Advanced Readiness (SIMITAR). The Reserve Component need provided the initial opportunity for the prototype system, but other applications are readily apparent.

2. Facts:

a. Doctrinally based prototype staff training modules have been developed for individual training at battalion and brigade level. Included are interactive software and text supporting materials for the XO, S1, S2, S3, S3 Air, S4, Fire Support Officer, Signal Officer, Chemical Officer, Air Defense Artillery Officer, Engineer, and Chaplain (at brigade replaced by the S5 module). A Common Core Course is used by all staff officers.

b. Modules provide core material necessary for an officer to function in a staff position. Included are an online glossary of terms and acronyms, references, diagnostic pretests, within-topic quizzes, practical exercises, and a final examination to measure progress and provide feedback.

c. The brigade level BSTS, completed in February 1996, will be distributed to select National Guard brigades. Beyond the prototype system, to include CS and CSS training, the BSTS will be expanded to include commander modules and will be incorporated into the FORCE XXI Training Program at Fort Knox for application to the Active Component. Research at the Joint Readiness Training Center may bring future applications.

d. The BSTS allows the staff officer to train at his own pace. The prototype program, on a 486 PC with CD-ROM and specific installed hardware and software, permits networking for electronic mail and for training management functions to monitor individual progress. Adaptable for any course of instruction, the BSTS model can become a cornerstone for individual and small group simulation training. It can be used for distance learning and to augment institutional or unit training for newly assigned personnel, and has potential for enhancement of other training.

e. BSTS is a prototype system, with specific hardware and software requirements, and is not available through normal channels. Potential users should contact ARI or ARPA for information. APRA POC, COL Randy Krug, (703) 696-2323.

3. Point of Contact: Marnie Salter, U.S. Army Research Institute, Infantry Forces Research Unit, Fort Benning, GA, (706) 545-5589 or DSN 835-5589.

COMMANDER'S BATTLE STAFF HANDBOOK

1. Purpose: The U.S. Army Research Institute's *The Commander's Battle Staff Handbook* provides an immediate response to the need for improving battalion staff functional area training. The information contained in the handbook provides the individual with an objective means of determining staff functional capability and assessing staff actions, in addition to providing fundamental references for inexperienced staff officers. It describes the core duties of battalion staff officers and key staff officers on that staff.

2. Facts:

a. Current officer training programs do not systematically provide necessary functional area skills. *The Commander's Battle Staff Handbook* serves as an interim tool to meet this critical requirement. The handbook is a reference document, not a complete training program.

b. The handbook can serve as a battalion commander's guide to staff functional duties in combat preparation. It can also be used to give the battalion's new staff officers a starting point to learn their own garrison responsibilities because functional area skills references are provided.

c. This handbook cannot replace functional areas skills training and the valuable experience acquired during staff and field exercises. It can, however, be the supportive first step for the enthusiastic staff officer who lacks initial knowledge and comprehension about his duties.

d. The handbook is divided into 12 sections: executive officer (XO), command sergeant major (CSM), personnel and administration officer (S1), intelligence officer (S2/BICC), operations officer (S3), assistant (S3-Air), logistics and battalion motor officer (S4/BMO), fire support officer (FSO), engineer, air defense artillery officer (ADA), signal officer, chemical officer, and the chaplain.

e. Primary topic areas include: Introduction, Assets (of the staff/slice position), Primary Duties, Staff Coordination, Planning (for the operation), Preparation (for the operation), Execution (in the operation), Conclusion, and References. Key points are highlighted throughout the sections. A set of checklists is presented at the end of each section—one for the battalion commander and one for the staff/slice officer.

f. Handbooks are available in camera-ready form or on disk (WP 5.1). Local reproduction is authorized and encouraged.

3. Point of Contact: Dr. Robert Pleban, U.S. Army Research Institute, Infantry Forces Research Unit, Fort Benning, GA, (706) 545-1360 or DSN 835-1360.