

Research Memorandum 77-5



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**THE EXPERT INFANTRYMAN SQUAD AND  
PLATOON EVALUATION (EISPE) I CONCEPT:  
EVALUATIONS AND OBSERVATIONS**

H. C. Strassel, Thomas G. Ryan, and Larry Word

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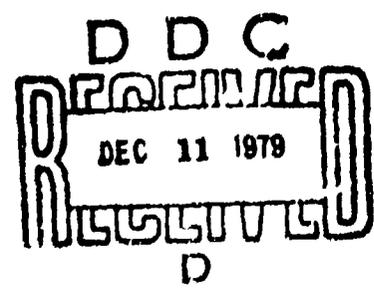
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EVALUATIONS AND OBSERVATIONS**

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**THE EXPERT INFANTRYMAN SQUAD AND PLATOON EVALUATION (EISPE)  
I CONCEPT: EVALUATION AND RECOMMENDATIONS**

**INTRODUCTION**

The Army Research Institute Field Unit in USAREUR was asked by the 8th Infantry Division to assist in assessing feasibility of a new concept in individual, squad, and platoon evaluation. ARI agreed to observe a field test of the concept, and to provide advice and recommendations about the evaluation concept to the Division staff.

ARI was particularly interested in feasibility of the concept as a training/testing device, in effect of the tactical situation on the Expert Infantryman Badge test (EIB), and in the evaluation techniques applied at successive stages.

This paper presents the ARI assessment of the field implementation of the Expert Infantryman, Squad, and Platoon Evaluation (EISPE) in Baumholder, Federal Republic of Germany, during 5-13 January 1975. A summary of observations and recommendations is made by ARI's research and staff scientists during EISPE, as well as an assessment of the EISPE concept.

This report consists of three major sections. This section describes the development of the basic EISPE concept and the ARI study of the field test in Baumholder. The second major section summarizes ARI's conclusions and recommendations about EISPE. The third section presents the detailed findings of the study, with discussion of the data, and specific recommendations about each area evaluated within the EISPE concept.

**BACKGROUND**

The Expert Infantryman, Squad, and Platoon Evaluation (EISPE) concept was developed by the 8th Infantry Division in response to a charge from the Department of the Army to build an improved Expert Infantryman Badge (EIB) test. The EIB tests were oriented too much toward memory of sequential processes and too little toward realistic performance as the criterion for success.

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\*At the time, Dr. Douglas S. Holmes was Chief of the ARI Field Unit in USAREUR, and Harold C. Strasel was the Unit Training Work Unit Leader.

The EISPE concept is an initial step toward development of such a performance-oriented EIB test, in a tactical setting, and in combination with squad and platoon exercises. The concept was developed by the 8th Infantry Division G3 staff as a 7-day field exercise.

ARI representatives met with division staff and personnel from one battalion within the Division, during December 1974 to discuss the EISPE concept and the implementation of the field test. This led to ARI observations of the field test to collect data for evaluation of the basic EISPE concept.

#### THE EISPE CONCEPT FIELD TEST

As indicated above, EISPE combines a modified EIB test with tactical exercises for squad and platoon sized units. The staff of the 8th Division complied with the request to examine the EIB requirements of AR 672-12.

Subject areas and tests were extracted which best reflected the performance required of Infantrymen and which could be tested in a tactical setting. Thus, the EISPE concept incorporated most aspects of the EIB tests into a 7-day field exercise with squad and platoon activities based on Army Training Tests (ATTs).

The EISPE concept is intended to provide a unit commander with realistic assessment of the capability of his individual infantrymen, his squads, and his platoons, to perform successfully under simulated battlefield conditions.

The 8th Infantry Division G3 staff prepared the EISPE Letter of Instruction (LOI), Conduct of the Expert Infantryman Squad and Platoon Evaluation (EISPE).<sup>\*</sup> Responsibility for the test was assigned to a brigade commander, who selected one of the battalions in his brigade to implement the test.

The EISPE concept consisted of four phases: Phase I and II comprised EIB test portions; Phase III the squad test portion; and Phase IV the Platoon evaluation phase.

In implementation of the concept, Phase I occurred the first day of the mission, during which the platoon members made a 12-mile forced road march (to be completed in three hours for satisfactory performance), established a bivouac area, and took up night defensive positions.

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<sup>\*</sup> Letter of Instruction, Conduct of the Expert Infantryman, Squad and Platoon Evaluation (EISPE), AETHGC-T. Bad Kreuznach, Federal Republic of Germany: 8th Infantry Division, G3 Training, undated.

Phase II, days 2 and 3 of the sequence, consisted of tests of the individual skills for the EIB. In the event of inclement weather - which occurred - events not completed were to be made up after the 7-day sequence.

Phase III, scheduled for days 4 and 5, required evaluation of squad performance on a mechanized reaction course and in both day and night patrol activities. Phase IV evaluated the total platoon while engaged in enemy contact and delay operations, night patrols, and a daylight attack. Live fire was used to add realism whenever possible throughout the EISPE operations.

For example, in Phase II, during weapons proficiency testing, live fire was required of all tested troops. Similarly, live fire was planned for the platoon operations in Phase IV. The former was successfully carried out; the latter was cancelled by weather conditions.

The EISPE concept required the platoon being tested to bivouac in the field for the entire 7-day period of testing. This condition added considerably to the stress of the test; its effect was heightened by the generally bad weather which generally prevailed during the test.

Evaluation of the EISPE sequence was performed by members of the tested battalion serving as evaluators/controllers. These personnel served as range officers, safety/evaluator NCOs, acting platoon leaders, and in similar positions requiring direction and evaluation of the individual and unit tasks.

Evaluation at all levels required the comparison of observed performance, by individuals and units, to specified criteria for success. The initial criteria for success, and the tasks to be performed, were derived from several sources. These sources included AR 672-12, squad and platoon ATTS,<sup>\*</sup> and prior experience and knowledge of the Division and Battalion personnel.

Checklists of specific behaviors necessary for success were developed for many of the tests. However, many test areas still required evaluations based solely on the judgment of the experienced evaluators.

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<sup>\*</sup>Army Training Test (ATT), Light Armor Battalion.

## METHOD

The purposes of ABI participation in the field test of EISPE were to assist the 8th Division staff in evaluation of the feasibility and effectiveness of the total EISPE concept, and to develop recommendations for conceptual and operational improvements. Specific goals were:

- (1) To evaluate the feasibility of the EISPE concept as a three-echelon training/testing device.
- (2) To study the effects of tactical situations on the quality and completeness of evaluation of individual soldiers, squads, and platoons.
- (3) To observe and critique EISPE evaluation techniques and criteria, with a view toward potential increases in objectivity, reliability, and validity of assessment of critical infantryman task performance.

ABI staff members were present at the EISPE test location through out the 7-day test period and observed nearly all events scheduled over the week. One afternoon's events were missed when individual skills as well as those associated with the platoon in the Defense were being conducted.

Observations were supplemented with interviews and discussions of the test with both evaluators and examinees. Many of these conversations were tape-recorded.

A pre-test questionnaire was also administered to 21 members of the platoon on the last evening of the exercise. A similar questionnaire was administered to 33 evaluator personnel the following day.

Appendix A contains a chart describing the 26 platoon members evaluated during the field test of the EISPE concept. This chart includes both demographic information about the platoon members and the results of the scoring of EISPE events up to the fourth day of the exercise. Make-up scores are not included in this chart.

Appendix B presents copies of the two questionnaires mentioned above and direct tabulations of the responses of platoon members and evaluator personnel to the questions.

## CONCLUSIONS AND RECOMMENDATIONS

This section summarizes major conclusions and recommendations based on observations of the EISPE field implementation. The general recommendations concern feasibility of the EISPE concept and its potential utilization as a major training/testing vehicle in USAREUR.

1. Feasibility of EISPE as a Testing/Training Device. ARI researchers concluded that the EISPE concept is basically a sound extension of the EIB testing and could be developed to combine the best aspects of the EIB with the ARTEP approach to training and evaluation of Infantry Squads and Platoons.

The concept can be developed into a training/evaluation vehicle with very high potential for providing and measuring realistic, effective, and exciting training performance for Infantrymen throughout USAREUR.

ARI recommended that the 8th Infantry Division undertake the necessary revisions and developmental steps to produce a viable, acceptable, effective, training/testing device applicable throughout the Division and USAREUR.

2. Effect of Tactical Situation on Evaluation. In general, ARI researchers felt that the tactical situation enhanced the assessment of the performance of individuals and units in this test situation. However, the tactical setting, with a new scenario for each new event, might become somewhat redundant.

For individual testing, the setting can have even a detrimental effect.

However, for the squad and platoon evaluations, ARI recommended maintenance of the tactical situation and its enhancement through inclusion of additional weapons systems: possibly tank forces and antitank weapons could be included along with additional weapons simulators.

Increased use of mines, booby traps, etc., by the aggressor forces also would increase the tactical realism. This recommendation appears consistent with the Infantry ARTEP No. 7-45 for integrated training/evaluation exercises for all levels from squads through battalions and combined arms task forces.\*

SCOPES\*\* and REALTRAIN\*\*\* assessment and engagement techniques could be used in all squad and platoon evaluation in EISPE. These techniques should be incorporated to the extent feasible and practicable, given Battalion and Division limitations, in further development of EISPE.

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\*Army Training and Evaluation Program (ARTEP), for Mechanized Infantry Battalion and Combined Arms Task Force. (7-45); July 1974.

\*\*Training Circular 7-2, Squad Combat Operations Exercise (Simulated) - SCOPES. Fort Benning, GA.: US Army Infantry School, 1973.

\*\*\*Training Circular 71-5, Tactical Training for Combined Arms Elements - REALTRAIN. Fort Knox, KY.: US Army Armor School, January 1975.

For the EISPE individual tests, tactical realism should be maintained and extended wherever it is not detrimental to valid and standardized evaluations of individual soldiers. Conversely, where tactical realism, or its pretense, interferes with successful, valid measurement of critical skill performance, tactical realism should give way to adequate evaluation. This latter requirement seems necessary to retain the prestigious qualities associated with winning the EIB - the demonstration of superior skills as an Infantryman.

The emphasis in the EIB should be on comprehensive and valid evaluation of those skills that best represent Infantryman expertise. Some EIB events did not appear to ARI to fall into the critical skill domain; these are mentioned in the detailed findings section.

3. Evaluation Techniques and Criteria in EISPE. As an initial attempt to field test a complicated and demanding concept for evaluation of Infantrymen and units, the EISPE field test was rated highly successful by ARI. As an exercise in standardized evaluation and a collection of reliable measures of the performance of individuals and units, the exercise was less successful.

Although all guidance for evaluation (especially the EISPE LOI and AR 672-12) was directed toward performance-oriented, objectively measurable testing, many individual tests and the squad and platoon evaluations were subjectively assessed. Where specific performance criteria, e.g., checklists, were defined, they were sometimes misunderstood and sometimes loosely applied. In many cases, performance-oriented criteria were framed as questions which required a subjective judgment by the evaluator.

This situation was attributed primarily to time pressures on the development and implementation of the concept rather than to any lack of effort to comply with all EISPE guidance. Effectiveness of evaluation techniques could be increased through standardization. Experience with EISPE could be the basis for further developing objectively defined, performance-oriented, evaluation techniques and criteria. If the EISPE concept were developed through refinement and further field testing, it could become a reliable vehicle for testing/training of infantrymen.

4. EISPE Development as a Testing/Training Device. ARI recommended that the EISPE concept be developed into a comprehensive and valid testing device for individuals and units, to include incorporating ANTEP and SCOPES recommendations for training and evaluations.

Further recommendations were that a refined EISPE be incorporated into Division-wide training schedules to prepare all battalions for EISPE testing; and that EISPE be made a scheduled training/testing event in the fashion of former ATTs and Battalion ORETs, on a regularly recurring basis.

An improved EISPE could thus become a vehicle for training, testing, and retraining for all battalions. Training schedules should set aside specific blocks of time for initial training in all aspects of EISPE, for the actual testing of the units with EISPE, and for retraining based on review of individual and unit successes and failures.

In this fashion, an expanded EISPE could be a central part of basic Infantryman and Infantry unit training within the Division and throughout USAREUR.

5. EISPE Utilization as a Testing Vehicle - with Feedback. If EISPE is developed and implemented as suggested above, EISPE testing should be conducted as a complete and cohesive unitary event, testing performance ability at all levels.

This includes the implication that individual or unit failures at specific events should not interrupt the conduct of the testing of that event. Rather, a detailed critique of each event should be provided to participants after events are completed.

Interruption of the test to provide feedback and additional walk-through experience may be good for training, but it is not good for the evaluation of actual skills in the tactical situation.

This "testing-only-while-testing" recommendation was based on the assumption that both initial training on the EISPE exercise requirements and a post-testing training period would be scheduled, as described above.

6. Evaluation as Performed-Oriented Assessment. Performance checklist used in EISPE were sometimes performance-oriented and sometimes only subjective decisions disguised in performance-oriented language. The January 1974 AR 672-12 includes a set of performance-oriented checklists associated with each individual test event (some of which may have been used in EISPE).

ARI recommended that these evaluation checklists should be considered as the basis for revisions necessary to obtain more adequate, performance-oriented checklists for EISPE evaluation. These could be used as a good point for further development and refinement.

7. Recommendation that Examinees be Informed of Evaluation Ground Rules. In the EISPE exercise, neither the examinees nor the examiners knew definitely whether failing individual EISPE tests would eliminate the test platoon members from consideration for the EIB award. An acceptable degree of confusion in a field test of a concept cannot be tolerated in a standardized training/testing device such as EISPE which eventually become.

ARI recommended that all troops involved in testing or training under an EISPE/ARTEPs concept be clearly informed of the ground rules for success or failure in the test condition. Rules for success, as well as rules for retaking portions of the test, must be clearly defined.

### SPECIFIC RECOMMENDATIONS

The results of ARI observations and data collection during the EISPE field implementation are presented in detail in this section. Though results are generally presented for each event in the order tested, some events are discussed in logical groups which ignore the order of testing.

Events for the individual testing (EIB) are discussed first; data from observations of Squad and Platoon exercises are presented later. For each event, observations are discussed and pertinent recommendations are presented concerning the EISPE concept or its implementation.

Specific recommendations deal with individual steps in evaluation, and what is needed to make the EISPE evaluation more effective and more valid as a test of individual, squad, and platoon performance.

#### INDIVIDUAL INFANTRYMAN TESTS (EIB-PHASES I AND II)

##### 1. Road March

a. Observations and Discussion: ARI staff members arrived at the termination point for the 3-hour, 12-mile road march shortly before the time limit for successful completion of the event. The route of their approach to the terminal bivouac area covered much of the route of the march, allowing observations of the terrain and the last few soldiers on the march. The wet, cold, foggy weather was also noted.

Discussions with several commanders were conducted at the finish line. Interviews with three soldiers who were successful on the march were conducted shortly after the march.

The terrain and climatic conditions existing during the march combined to make this a fairly demanding and stressful exercise for the troops. This was reflected by the fact that only 15 out of the 26 platoon members participating in EISPE finished the march within the 3-hour limit.

However, marchers were not required to carry the individual field equipment (pack) specified by AR 672-12. Also, there was no attempt to assess the marchers on any other individual events immediately after the road march. (AR 672-12 states that Weapons Proficiency, General Subjects or the Adjustment of Mortar Fire will be tested immediately after the march.)

Although AR 672-12 (Jan 74) states that the road march may be repeated within 30 days if not satisfactorily performed, the platoon members believed that failure here wiped out all chance of winning the EIB.

The combination of the stress of the march itself and the clear knowledge of personal success or failure was believed likely to affect troop motivation adversely for the other EIB events. Interviewed soldiers agreed that failure probably would adversely affect the motivation of their unsuccessful peers.

Commanders also remarked that morale would be hurt and that a high quality of leadership would be required to motivate the failed troops to continue their efforts on the remaining EIB tests. Conversation with platoon members the next day verified that their morale was lowered by this initial failure and that some troops felt there was little point to the rest of the exercise.

However, most of the failed troops appeared to recover their motivation during the week. Morale was observed to be fairly high in the last two or three days of the exercise.

The road march is intended to test the stamina and ability of the Infantryman. The regulation's requirement for a specific performance test immediately following the road march requires the Infantryman to show he can still function acceptably after the stress of the march.

These seem reasonable requirements for the modern Infantryman and probably should be maintained in future EIB testing. On the other hand, there should perhaps be some further consideration as to when the road march and subsequent testing should occur.

Testing after the road march could be incorporated easily into the tactical situation of EISPE at a later point. For instance, the road march might be near the end of Phase II, after most EIB events had already been tested. This would greatly reduce any negative motivational effects or failures in the road march.

Although there may be a desire to test soldiers under severe conditions, and to observe their performance when they are fatigued, the regulation does not require this specifically. For instance, terrain for the road march is unspecified, and favorability of climate conditions should be considered by commanders in assessing individual performance.

b. Recommendations:

- (1) That the road march be rescheduled to occur later in the EISPE to allow more EIB events prior to the march.
- (2) That the Infantryman's ability to perform when fatigued be tested, as required by the regulation, by scheduling one of the required EIB events immediately after the road march.
- (3) That, in future EISPE tests, the troops undergoing evaluation be informed about the ground rules for both success and failure, including the possibilities for make-up testing. Such retests should be scheduled into the total concept for operational applications.

2. Weapons Proficiency

a. Observations and Discussion: Qualification for the EIB on the small arms phase of the test requires each man in a rifle platoon to perform a random sampling of the following function, as appropriate, on his primary weapon and one other weapon organic to his unit (AR 672-12 dated January 1974):

- (1) Disassembly and assembly
- (2) Stoppage and immediate action
- (3) Selection of firing positions
- (4) Range estimation
- (5) Fire commands
- (6) Preparation of range cards
- (7) Boresighting
- (8) Zeroing of current night vision device (Starlite scope) to weapon
- (9) Misfire procedures

Weapons tested during EISPE were the .45 caliber pistol, M16A1 rifle, M60 machine gun, .50 caliber machine gun, M72A2 light anti-tank weapon (LAW) and M203 grenade launcher (GL). Individual soldiers participating in EISPE therefore were tested on all weapons organic to a rifle platoon except the 90 mm Recoilless rifle RCLR.

Observations of the weapons proficiency tests, excluding makeups and retesting, for the EIB were made by three ARI scientists. ARI observers followed individual soldiers through each weapons sequence, monitoring evaluator instructions and the soldier's performance of each sequence.

Interviews were conducted with all evaluator and most examinee personnel after the test sequence. Successful completion of each weapons test required that the individual make the weapon operational and fire a specified number of rounds down range within a specific time.

Assembly and firing were to be done in 70 seconds for the .45 caliber pistol, 50 seconds for the M16A1 rifle, and 100 seconds for the M203 grenade launcher. For each of the M60 and .50 caliber machine guns, each soldier was required to load and fire 20 rounds down range, taking correct action for any stoppage, with 120 seconds.

Finally, individuals were required to place the M72A2 LAW into operation and fire one round down range within 100 seconds. Most test stations were manned by two evaluators - a timer and an observer. A single score of satisfactory or unsatisfactory was placed next to the individual's name upon completion of each weapons sequence.

Functions (3) through (9), noted above in 2a were not observed in any of the small arms sequences during the exercise.

Percentages of individual E1-E4's successfully completing each weapons sequence were reported as follows:

<u>Weapon</u>	<u>Percent Successful</u>
.45 Caliber pistol	62
M16A1 rifle	94
M60 machine gun	94
.50 Caliber machine gun	56
M203 Grenade Launcher	93
M72A2 LAW	92

When unable to complete a weapons sequence, the soldier was given an unsatisfactory, then talked through the sequence by an evaluator for the purpose of training. The primary reason for failures on the weapons was felt to be a lack of garrison training. However, eight of the 16 E1-E4's participating in EISPE had been in the Battalion for one month or less.

EISPE weapons proficiency tests were designed to be performance-oriented, utilizing live fires, to counter perceived shortcomings in the more common parade ground setting. Random selection of test functions, as prescribed in AR 672-12 (January 1974), would frequently result in a set which precludes the possibility of achieving live fire.

Therefore, if live fire is required for every tested soldier, assembly, correction of stoppage, and getting the prescribed number of rounds down range within a specific time frame may be an adequate set of tests for EISPE.

Interviews with evaluators from all small arms stations indicated the use of criteria in addition to completed actions within time limits for scoring examinees. These considerations included judged familiarity with the weapon, assembly sequence, method of loading, and allowance for weather conditions.

Some examinees were permitted to exceed the allotted time on a weapon due to the cold, for example, and were still given a grade of satisfactory. Evaluators in all test situations also stated that the time allotment for their weapon should be revised.

Finally most evaluators felt that under live fire conditions a demonstrated ability to hit or come within a prescribed radius of a target would make the whole sequence of tests more realistic, enhance objectivity of scoring, and discriminate more readily among examinees.

b. Recommendations:

- (1) That all weapons organic to the unit being tested be included.
- (2) That, if live fire is required of all examinees, a fixed set of functions be selected for each weapon, requiring it be assembled, sighted, and brought to bear on a target.
- (3) That each examinee be tested on his own weapon and a crew weapon randomly assigned from a pool of weapons with which he should be familiar.
- (4) That, if live fire is used, the tests require satisfactory use of sighting and range estimation capabilities as appropriate for each weapon.

- (5) That, under any test conditions, an adequate objective test of range estimation skills be included within EISPE.
- (6) That scoring check lists be developed for each weapon to score performance objectively on each function prescribed, total time required to complete sequence, and ability to engage a target.
- (7) That revisions to the time allotted on each weapon utilized in EISPE be considered. The following are suggestions obtained from evaluators and participants during EISPE:

<u>Weapon</u>	<u>Current Time</u> (seconds)	<u>Suggested Time</u> (seconds)
.45 Caliber pistol	70	70-80
M16A1 rifle	50	60-80
M60 machine gun	120	60-80
.50 Caliber machine gun	100	30-50
M203 grenade launcher	100	50-60
M72A2 LAW	100	50-60

### 3. Hand Grenade Assault Course, Combat Techniques, and Cover and Concealment

a. Observations and Discussions: The EISPE LOI required that the hand grenade assault course described in FM 23-30\* was the basis for evaluating individuals in use. Several soldiers were observed through the course and detailed information concerning makeup of the course and criteria used in evaluation, and recommendations for improvement of the evaluation were obtained from the NCOIC. Combat Techniques as described in AR 672-12 were not evaluated formally in this field test of EISPE.

Cover and concealment reportedly were tested separately, but this event was not directly observed by ARI personnel. Comments on these subjects are directed to the instructions contained in the 8th Division EISPE LOI.

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\* FM 23-30, Grenade and Pyrotechnic Signals, 16 December 1969.

Individuals were evaluated with respect to four areas in negotiating the assault course. There were: personal camouflage and use of concealment, aggressive behavior when fired upon, accuracy of grenade throws, and the choice of cover over concealment when available.

Several problem areas in the grenade assault course were noted in the application of these criteria, however. First, lane graders interjected themselves frequently to "guide" soldiers through the course. This resulted in confusion as to how much latitude the individual actually had to select his own covered and concealed routes of approach.

In some cases, individuals were informed after the fact that they were to have assumed that a wall or a berm existed. The actual assessment on these four areas was entirely subjective judgment by the evaluators. Evaluation in the area of movement techniques appeared open to question as to reliability and accuracy.

The criterion for accuracy of grenade throws was objective enough (i.e., Did the grenade go through the window or not?), but in some applications, it could become overly restrictive.

The grenade is an area weapon and individuals should have an area to hit rather than a point target. Dummy grenades without pins or fuzes were used in negotiating the course. If at all possible, practice hand grenades with fuzes should be employed in this course.

To evaluate the "critical" behaviors involved in these three subjects, the individual must be placed in as realistic a setting as possible. The cues presented to the soldier (the enemy, his weapon effects, his placements, the terrain, the mission guidance) should demand specific behaviors at the required level of proficiency. The soldier should not have to make major assumptions about cues in order to decide correct actions.

The grenade assault course used in the EISPE was relatively easy to construct, operate, and support. With minor modifications, it could be expanded to accomplish testing in all events for the three areas of hand grenades, cover and concealment, and combat techniques. Appendix C describes a possible use of SCOPES techniques, in conjunction with a modified hand grenade course. This could increase the realism of this test and also improve the objectiveness of the scoring.

The NCOIC of the battalion hand grenade course used in the observed implementation of EISPE provided a number of suggestions about course improvements and evaluation criteria. Appendix D presents an outline map of the grenade course as used in EISPE and a list of the scoring procedures recommended. These might be used with an integrated course as suggested above.

b. Recommendations

- (1) That consideration be given to combining subjects into one comprehensive test of individual tactical ability in an integrated course similar to that described in Appendix C.
- (2) That criteria for the grenade throw be reviewed to insure the standard can be attained with a normal degree of training.
- (3) That the criteria and scoring procedures presented in Appendix D be considered for possible use, after refinement, in an integrated assault course as described above.

4. Claymore and Mines and Demolition

a. Observations and Discussion: Detonation of a 1/4-pound block of TNT ("Demo"), and of a Claymore mine ("Claymore") and "Minefield Techniques" are discussed together since they involve related skills: proficiency in the recognition, handling, and use of explosives.

"Demo" and "Claymore" tests were conducted on a single range using live fires during daylight hours. "Minefield Techniques" testing was conducted in a platoon defensive position during late afternoon.

ARI scientists observed individual tests at both "Demo" and "Claymore" sites and subsequently conducted interviews with both subject and evaluator personnel. Actual observations of "Minefield Techniques" were not made, but one member of the ARI staff interviewed examinee and evaluator personnel at the test site.

(i) "Demo" 1/4 Pound Block of TNT

Each soldier was presented with the following demolition equipments spread out before him on a mat:

- (a) 1/4 block TNT
- (b) 1:05 time fuse
- (c) M-2 Cap crimpers
- (d) Non-electric blasting cap
- (e) M-60 fuse ignitor
- (f) M-1 primary adapter

The soldier was required to assemble the charge, implant it in an open field, and detonate it. A safety NCO/evaluator monitored each soldier and accompanied him to the location where the charge was to be detonated. Evaluation was accomplished by use of a checklist to note each step successfully completed by the soldier (AR 672-12 and FM 5-25).\*

When the examinee did not know how to begin the assembly sequence or was not familiar with the equipment, the evaluator provided initial assistance. If the examinee were able to continue the test sequence after the first few steps, his performance was considered satisfactory on the "Demo" test.

If he had to be led through the majority of steps, he was given an unsatisfactory. All soldiers went through the entire "Demo" sequence, aided or unaided. No time limit was imposed. Of those E1-E4 tested, 47% received a satisfactory rating (see Appendix E for checklist).

(2) "Claymore" Mines

Individual soldiers were required to emplace and detonate a live M18A1 Claymore mine. Equipment used included a Claymore bandolier and an M40 circuit tester. The sequence of steps tested was:

- (a) A circuit check
- (b) Laying the Claymore
- (c) Aiming the Claymore
- (d) Arming the Claymore
- (e) Rechecking the aim of the Claymore
- (f) Firing the Claymore
- (g) Retrieving the spent Claymore firing wire, detonator and circuit tester; and repacking each in the bandolier.

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\* FM 5-25, Explosives and Demolitions, 5 Jan 1971.

A single Safety NCO/evaluator observed each examinee as he went through the arming and detonation sequence. Evaluation was accomplished through use of a checklist to check off each step in the sequence as completed successfully by the subject (AR 672-12 and FM 23-23).\*

Instructions for the employment of the Claymore were printed on an inside flap of the bandolier; therefore, if assistance from the evaluator was required, the soldier was given an unsatisfactory on this test. All subjects went through the entire test sequence, either aided or unaided. Of those E1-E4 who attempted the test sequence, 93% received a satisfactory rating.

(3) "Minefield Techniques"

ARI staff interviewed examinees and evaluator personnel about the "Minefield Techniques" test. Interviews indicated five of the six mines specified by the 8th Infantry Division LOI were employed: the M14, M15, M16A2, M19, and M21. The M18A1 Claymore was not included since individuals were being tested on it during another phase of the EIB test.

The 8th Infantry Division LOI specified that individual soldiers were to negotiate a minefield in which the above-noted mines were implaced, to identify each type of mine, and to disarm it. AR 672-12 requires these steps as well as the arming of each type of mine.

Interview data suggest that not all the soldiers were required to negotiate the minefield; but all examinees were required to identify each mine; and all examinees were required to disarm the M14 and M15. The M16A2, M19, and M21 were wooden models and could not be disarmed.

No evaluation checklists were employed in the evaluation. No time limit was imposed. Of those E1-E4 graded on the test sequence, 87% received a satisfactory rating.

Observations and interviews with examinee and evaluator personnel at the "Demo" test site indicated that realistic criteria were being used. Nonetheless, evaluator personnel felt that the checklist could be expanded and made sufficiently definitive that scale ratings rather than a checkoff system could be used to score individuals on each test point.

These same evaluator personnel rejected time to assemble and detonate as a criterion. Interviews with E1-E4 examinees indicated that the high percentage of failures (53%) could be attributed to the fact that few, if any, had worked with TNT before.

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\* FM 23-23, Interpersonnel Mines M181 and M18 Claymore, Effective 6 January 1966.

Observations and interviews with examinee and evaluator personnel at the "Claymore" site suggested that evaluation checklists also might be expanded to accommodate ratings on each test item.

Familiarity with the Claymore mine and accompanying instructions contained in the bandolier led to the suggestion that a time limit might be added as a scoring criterion; evaluators suggested that approximately four minutes might be used (see Appendix E for checklist).

Interview data collected at the "Minefield Technique" site suggest that replicas of mines should not be used for testing since arming and disarming cannot be demonstrated this way.

b. Recommendations

- (1) That no time limit be placed on the three test sequences. These are power (knowledge) tests rather than speed tests, and only rarely would speed be required in accomplishing these tasks.
- (2) That current evaluation checklists for demolitions be modified to incorporate all appropriate criteria and to include rating scales if appropriate.
- (3) That current "Demo" and "Claymore" checklists be modified to reflect the live fire environment if this is to be maintained; e.g., a Claymore mine cannot be retrieved and placed in its bandolier after it has been fired.
- (4) That evaluators define the maximum number of steps in "Demo" on which a soldier can be assisted and still pass the event.

5. General Subjects and Field Hygiene and Sanitation

a. Discussion: ARI did not observe directly any evaluation of General Subjects or Field Hygiene and Sanitation during EISPE, although the 8th Infantry Division LOI called for observation and evaluation of these subjects throughout the exercise by the Battalion evaluators.

Presumably, this evaluation was accomplished, although no record of success or failure was indicated in ARI records of platoon member performance.

While these subjects are important to successful survival in combat situations, especially such items as challenging, sentry behaviors, water purification, and waste disposal, the question is whether to include them in the test for the Expert Infantryman Badge. If necessary, the incorporation of their evaluation into the overall tactical situation as planned here is probably the best approach. There remains the problem of actual testing of all individuals.

b. Recommendations

- (1) That reconsideration be made of the essential need for evaluation of these subjects within the context of the EIR test.
- (2) That, if these subjects are retained in the EIB, they continue to be evaluated in the context of the on-going situation, and that efforts be made to assess effectively the ability of each individual troop being tested.

6. First Aid

a. Observations and Discussion: Testing of first aid knowledge was observed while the platoon was in a defensive position on the second day of the exercise. The testing consisted of questions being put to each platoon member by a Medic. Questions required the examinee to describe how he would treat a wound or specific situation involving a casualty.

Correct answers consisted of specific procedural steps to be followed for each case. Each platoon member was asked only one question and had only one chance to get it right. Only 60% of those troops for whom data were available were able to answer their questions successfully.

This approach to examination seems unacceptable from the viewpoint of both the regulation and the 8th Infantry LOI. AR 672-12 calls for testing the soldier in actual performance of artificial respiration and other methods of life saving, and in applications of first aid dressings and splints. Similarly, the LOI calls for "each individual (to) take proper action on": a bleeding casualty, a casualty with a leg fracture, and an unconscious casualty with a weak pulse. In both cases, the requirement is for testing performance of the soldier, not his ability to verbally recall a procedure for treatment.

Testing the performance of each soldier in these requirements may be basically impossible within the context of the tactical situation that is maintained in EISPE. Perhaps, for this event, the troops should be brought into a station type situation and presented with simulated victims of the required casualties. The stations could be set up adjacent to the defensive positions, and single individuals could be led to stations under the guise of a scouting or similar mission. Then action appropriate to each casualty would be performed. Standard simulated casualties could be used in such modified station approaches and would allow both "hands-on" performance testing and training to be accomplished simultaneously.

b. Recommendations

- (1) That first aid testing be made performance-oriented with evaluation of "hands-on" treatment of the required casualties.
- (2) That the tactical situation of EISPE be modified as necessary to allow the necessary "hands-on" evaluation of these critical behaviors by each examinee.
- (3) That realistic simulated wounds and other casualties be used for all performance testing in this area.

7. Land Navigation and Night and Day Compass Course

a. Observations and Discussions: The planning for the operation of the day and night compass course was observed, interviews conducted with the OIC and NCOIC, and individuals followed through the night course. None of the land navigation tests outlined in AR 672-12 were evaluated by the battalion.

Some problems were noted in the administration of the compass course. The system of lane following and evaluation was complex; but, in order to randomize lanes and still operate with a minimum number of points to reduce the logistical support, any system employed is necessarily complicated.

Thorough briefings and dry runs should be provided for evaluators to insure that individuals being graded will not be given incorrect azimuths or instructions.

In this case, the course itself may not have been challenging enough to separate individuals accurately who could use the lensatic compass from those who could not. Individual legs of the course were short, averaging about 140 meters with some as short as 65 meters.

Also, it was not clear whether tested individuals could use flashlights (lights either carried by themselves or used at the compass stakes by evaluators). It is also desirable to test the individual's ability to set the compass using the clicks on the bezel ring, an ability not clearly evaluated here.

Scoring criteria were changed just 24 hours before running the compass course. Initially, individuals were allowed to miss one stake (leg) of the night course out of a possible seven stakes (legs). The passing criterion was the same for the day course.

Satisfactory performance requirements were changed, for both courses, to allow the individual to go back and try again on any leg of the course that he missed. The only requirement was that he complete the entire seven legs of this course correctly within three hours in order to pass.

If a unit or patrol is given a mission in combat, it is unlikely that they would have a chance to start over if they miss their objective. Criteria recommended in AR 672-12 appear to be not only more objective than the revised requirement described above, but also more realistic.

The percentage of error allowed may need to be adjusted slightly according to the terrain, but an individual's actual ability can be determined. Many individuals in the platoon tested at Baumholder completed the course in under two hours, which could have allowed them multiple attempts at multiple legs of the course.

Although the regulation leaves the unit great latitude in constructing a course, normal mission requirements dictate that day compass legs should be 400-500 meters in length; and night legs, 300-400 meters, to provide a true test of ability with the compass.

A more serious deficiency exists in AR 672-12 as well as in the RISPE navigation test: no attempt is made to evaluate one of the most critical skills in navigation - the ability to relate map contour lines to terrain.

A simple but effective test for navigation is: Can the individual move from Point A to Point B in a reasonable length of time and maintain his orientation enroute? The daylight navigation course should require the individual to demonstrate his ability to put "all the pieces together." A method of accomplishing this objective is outlined in Appendix F.

b. Recommendations

- (1) That individual legs on the compass course be lengthened to a minimum of 300 meters to provide a more accurate evaluation of ability to use the lensatic compass.
- (2) That criteria for land navigation be determined on a percentage error basis as outlined in AR 672-12. This should be adjusted locally by the commander depending on the difficulty of the terrain.
- (3) That consideration be given to changing the daylight compass course to an integrated navigation course similar to the course described in Appendix F.
- (4) That other tests outlined under land navigation in AR 672-12 be considered for elimination from the regulation due to their questionable relevancy.

## 8. Military Intelligence

a. Discussion: This subject was not observed directly, but the 8th Infantry LOI calls for continuous evaluation of platoon members in this subject throughout EISPE. The evaluation was to be based on observations of proper performance by individuals in the course of squad and platoon experiences.

AR 672-12 calls for direct performance testing of soldiers in proper methods both for information recording and transmission including Enemy Unit Size, Activity, Location, Time and Equipment (SALUTE) and for handling and processing prisoners of war and captured documents.

Although some evaluation was included in EISPE squad evaluations, it is not clear whether this was sufficient to give commanders an accurate knowledge of their troops' abilities. Because of the importance and the basic difficulties inherent in obtaining and forwarding military intelligence and in dealing with POWs, this area deserves more effective evaluation than appears to have been given in EISPE.

### b. Recommendations

- (1) That the basic requirements for testing soldiers' military intelligence abilities be incorporated directly from AR 672-12 into the EISPE concept.
- (2) That appropriate performance-oriented techniques be developed for this critical skill. These could be based on the current requirements in the regulation but modified to allow incorporation into the EISPE tactical concept.

## 9. Adjustment of Mortar Fire

a. Observations and Discussion: This skill was not directly assessed in EISPE. Rather the evaluator required each individual to give a complete request for fire and then talk his way through the adjustment of a fire mission using points plotted on the map. Use of the Target Ranges Estimation Formula (WORM) formula was required. As it happened, intense fog on the day of the test prevented any actual attempt to adjust rounds in either a live or simulated mode.

This particular skill is one of the most important for any infantryman to master. The individual should be tested directly on his ability to put actual rounds on a target, and live fire exercise would certainly be most desirable. However, the logistics and safety restrictions on live indirect fire probably preclude use of this option.

There is another method of obtaining an objective measure of this skill. It uses a simple grid system marked off in a target area and employs artillery simulators to produce the effects of rounds. The system is explained in detail in TD-7-2, SCOPES. The system requires two personnel, working approximately one hour, to set up the grid system.

The evaluator, acting as "FDC," then plots the adjustments and uses a PRC-77 radio to communicate with the individual(s) actually placing the simulated rounds. It is possible to use either the "mark center of sector," coordinates, or "shift from a known concentration" method of adjustment given by the student in near real time.

A possible method of testing would involve briefing the individual to be tested and having him move to a foxhole position where a TA-312 telephone is located. At this point an evaluation of his ability to set up and operate this telephone could be accomplished also.

The individual could then have a target pointed out to him and be required to transmit a complete initial request for fire, using a randomly selected fire mission. All the major critical evaluation items should be present in this request, but could be given in any order.

Use of degrees instead of mils should be permitted. If this request is unsatisfactory, the evaluator could score this accordingly, then help the individual complete the request so that he will adjust a mission in any event.

Criterion for successful completion of this test could be to have the third adjusted round land within 50 meters of the designated target. ARI experience indicates that with a minimum of practice, fire team leaders have often been able to put their second rounds on target at ranges of 500-600 meters.

b. Recommendation

That consideration be given to using one of the systems described in Appendix G to provide a realistic and objective evaluation of each individual's ability to adjust mortar fire.

10. Nuclear Biological Chemical (NBC) Warfare

a. Observations and Discussion: While only part of the NBC evaluation was observed, interviews with tested troops provided additional data on the techniques and materials used to evaluate these skills. Both the 8th Infantry LOI and AR 672-12 require the testing of the soldier in the recognition and placement of contamination markers, in reaction to an unknown liquid chemical agent, and in reaction to a nuclear explosion.

Troops in the EISPE exercise were observed in the reaction to an unknown chemical agent: by donning and correctly clearing the protective mask and hood. Evaluation was accomplished through application of a combination of proper procedural sequence and time limit criteria.

Incorrect clearing of the mask resulted in a score of unsatisfactory as did an excessive time for masking. No observations were possible of the reactions to explosion or the identification of the NBC markers. Troops reported that these occurred and that evaluation was fair from their viewpoint.

Troops also reported that some identification requirements, added to the basic evaluation requirements, were not considered fair. Troops reported that they were required to identify individual dosimeters, company-level radiometers, and other equipment, some of which they had never seen.

Some reported equipment was so rarely encountered that only company specialty teams would be expected to know and operate it. This requirement appears of questionable value to the EIB testing.

b. Recommendations

- (1) That unnecessary and inappropriate requirements for equipment identification be eliminated from the EISPE on future exercises.
- (2) That the performance-oriented measures listed in AR 672-12 be incorporated into EISPE for NBC testing.

11. Signal Communications

a. Observations and Discussion: Individuals were observed being tested on their ability to communicate using the AN/PEC-77 radio while preparing platoon defensive positions. They were required to assemble this radio (including battery, antenna, and hand set), enter a net, encode a message using a Unit Communications and Electronics Operating Instructions (CEOI) and transmit it.

This situation is an excellent example of how a variety of tests found in AR 672-12 may be combined and evaluated objectively. Evaluators, however, should have a detailed checklist to insure they record successful or unsuccessful completion of each subtest. These measures are also easily integrated into almost any tactical situation without affecting measurement of proficiency.

Individuals were not tested on the operation of the squad radio AN/PRR-9, the AN/PRT-4, or the telephone. These items are organic to a rifle company and, if used properly, greatly increase an infantryman's ability to communicate. The TA-1 telephone could be substituted for the TA-312/PT for rifle squad members.

b. Recommendations

- (1) That squad radio AN/PRR-9 and AN/PRT-4 be included as part of the individual signal communication test.
- (2) That either the TA-312/PT or TA-1 telephone set be included as part of the individual signal communication test.

12. Physical Training (PT) Test and Weapons Qualifications

a. Discussion: The new AR 672-12 sets more stringent requirements for both of these events than does the old regulation. For PT scores, each soldier is required to have an overall score of 400 and no less than 60 on each part of the test. For weapons, the soldier must have qualified as "Expert" with his individual weapon.

Evidently, not all members of the EISPE test platoon had qualified on the PT test within the required period; scores were not available for all members of the platoon. ARI received no information about the individual weapons qualifications of the platoon members. It appears that these two requirements may have been intentionally excluded from the EISPE field test by the 8th Infantry Division Staff.

Individual weapons proficiency is an important part of being a highly qualified infantryman and this requirement should be retained to qualify for the EIB. Similarly, physical fitness should be basic to the EIB qualification. There is, of course, no requirement for these qualifications to be tested during EISPE; these tests could be conducted at prior or later times, and should not interfere with the overall administration of EISPE as test or training.

b. Recommendations

- (1) PT tests and weapons qualifications be retained as skill requirements for EIB awards.
- (2) That conduct of these skill tests not interfere with the EISPE skills.

SQUAD AND PLATOON EVALUATIONS (PHASES III AND IV)

The EISPE concept requires the evaluation of individual squads and the total platoon in their performance of tactical missions. These evaluations took place on days 4 through 7 of the EISPE exercise. Most of the events undertaken by individual squads and by the platoon as a whole during this period were observed while riding in an Armored Personnel Carrier (APC) with the evaluator or with one of the squads in the exercise. Data collection also included discussions and interviews with the tested individuals and evaluators, before, during, and after the problem execution.

## 1. Squad Evaluations

Squad evaluation exercises consisted of a mechanized reaction course, and day and night patrol activities. These events comprise virtually all the common missions a squad normally would perform alone in combat.

a. Mechanized Squad Reaction Course: The test scenario required that each squad move from its night defensive position with the mission of establishing a forward assembly area approximately 10-12 km. to the north. Enroute to that forward assembly area, each squad encountered a series of specific incidents. These were designed to test the leadership ability of the squad leader and the ability of the squad to work as a team in unanticipated confrontations with an aggressor. Incidents requiring a reaction by each squad included:

- (1) Ambush
- (2) Crossing a major danger area (road)
- (3) Establishing and securing an intermediate assembly area
- (4) Traversing a mine field
- (5) Attacking an enemy force holding a section of high ground overlooking the proposed forward assembly area
- (6) Establishing and securing assigned portion of forward assembly area
- (7) Performing APC maintenance

The ARI observer and the evaluator followed through the maneuvers in a separate APC, dismounting at each "incident" location to observe more closely the reactions of the test squad to the ambush, etc. Sources of squad performance data collected included: interviews with the evaluator and examinees; review of the test scenario (Operations Order and Frag Orders) and evaluator checklist; (see Appendix E for checklist) and direct observations of the test layout, realism, aggressor activity, and enthusiasm displayed by the test squad. Time required to traverse the course was approximately 5 hours per squad. Approximately 3 hours of this time were spent in critiquing and repeating squad performance. Task repetition was required for each event in which the evaluator judged that the squad had not reacted satisfactorily to the incident on the first encounter.

b. Squad Patrolling: Each squad was required to perform three daytime patrols and one night patrol. The day patrol missions were three separate types: an ambush, a raid, and a reconnaissance. Each squad started with one mission and rotated to the others upon completion. The night patrol was a repetition for each squad of the first range they negotiated in daylight. All patrols were dismounted and all squads used blank fire procedures. Aggressor action was included in all patrols.

Three squads were followed through the cycle of three day missions and another squad through the night patrol mission (see Appendix E for checklist). Data collection was accomplished through observation, interviews with examinees and evaluators, and examination of the scenario for the exercises. Interviews were conducted before and after each patrol when possible.

c. Discussion of Events: Mission selection by the Project Officer or S3 always will be problematic for any testing/training situation. Selection of squad missions to be tested always will be limited by time and resource constraints. Units should insure that only highly probable missions, reflecting unit contingency plans, are required in EISPE.

For example, replacing an APC track shoe is a realistic problem for a squad, but the value of testing this skill must be weighed against the cost of devoting an hour or two of valuable testing time to this activity. Similarly, it is debatable whether the coordinated attack which culminated the reaction course should be included.

When the squad is required to dismount and maneuver against an ambush or a defended bunker, the ability for squad level offensive action can be measured directly in a realistic environment. The coordinated attack would allow additional assessment of the squad's ability to coordinate with adjacent elements.

However, whereas this coordination performance must be simulated in the squad situation, it could be evaluated directly when the squad performs in a coordinated attack with the platoon later in EISPE.

In general, the selection of incidents and missions for squad elements in these two basic exercises was appropriate for evaluating tactical performance ability. Patrol missions tested were sufficient to evaluate the wide range of skills expected of squads.

In both phases, squad leaders and troops demonstrated a fairly good grasp of the mechanics of squad reactions and patrolling. However, several aspects of the test situation reduced the degree to which individual troops actually carried out their missions in the appropriate manner.

These aspects were related to the degree of realism and demands on the individual troop to act as he would if he were in a combat situation. These aspects also affected the behavior of the leader, but to a lesser degree. Several items related to this major point are discussed below.

Miss-on planning for these tests should generate an atmosphere which will impress on these squads the dangers inherent in squad operations. Patrols are small elements operating behind enemy lines where only extremely limited support can be expected in the event of enemy contact.

Therefore, leaders should be required to prepare detailed orders and conduct extensive rehearsals. Thus focus on detailed planning could be enhanced by requiring patrol leaders to back brief their platoon leader/evaluator and coordinate fire support with the Mortar (FDC).

Evaluations of planning should represent a significant portion of the overall rating for any given mission. The traditional method for evaluating the planning phase of any tactical operation has been listening to a leader's orders and checking to see that he has covered all essential items.

It is critical that everyone have the information he needs to conduct the operation. Evaluation of communication could be accomplished by asking each soldier about critical items of information after the order is issued. If it is found that many troops do not understand the order, it will be evident that the communication was not effective.

The planning and communication were tested indirectly in the reaction course when the squad leader was "wounded" and replaced by a team leader. Generally, a lack of adequate communication was indicated by the confusion created by the substitute squad leader.

Lack of a realistic enemy and absence of knowledge of effects of the enemy's weapons lead to reduced individual motivation to perform. These factors also make assessment of squad performance more difficult. For example, the lack of a realistic enemy in the raid situation reduced the challenge to the squad and encouraged a hurried approach to the entire phase.

The raid which ARI scientists observed was completed 15 minutes after the patrol left their Objective Rally Point (ORP). They moved so quickly and with so little concern for cover that they were spotted hurrying into position. Also, the attack was conducted piecemeal. The squad leader later admitted that in combat he would have spent an hour, if necessary, moving into his position.

When casualty assessment techniques are employed, and success or failure of the mission can be objectively determined, units are much more likely to take whatever time is necessary to accomplish their mission. Use of the SCOPES techniques to increase both the realism of individual behavior and the quality of evaluation is discussed under platoon evaluation.

In addition to making the aggressor attacks and mission planning more realistic, some other factors should be considered in structuring the squad phases of EISPE. If more time were allowed and required for planning of patrol activities, the number of patrols possible might be reduced.

Consideration should be given to having each squad conduct only two patrols in daylight and the third patrol at night. It might also be possible to let the tested squads serve as their own aggressors in a two-sided engagement.

Thus one squad could conduct a reconnaissance patrol in opposition to a second squad's screening patrol. ARI has shown this mode of training/testing to be very effective within the SCOPES/REALTRAIN context. Patrols might also use "friendly front lines" positions for departure and "reentry" on patrols; this should increase situational realism.

Both squads being tested and aggressor forces should be provided with all required equipment. Screen patrols should be provided with mines and booby trap devices, for example. Also, all patrol units should be equipped with extra communications equipment, demolitions, binoculars, and similar equipment essential to effective squad action.

Aggressor forces should be provided with all available simulation devices for all normally encountered weapons in squad field maneuvers. These should include Anti-Tank Guided Missiles (ATGM), Light Anti-Tank Weapon (LAW), tank main guns, command detonated mines, and indirect fire. These devices could be integrated into both the reaction course and the patrol situations.

Additionally, squad operations depend heavily on the leader's ability to navigate tactically. This ability should be evaluated continuously. While individual EISPE tests address proficiency in this skill, navigation (mounted or dismounted) must be accomplished concurrently with a myriad of other duties. Leaders should be halted periodically by evaluators, be required to report their locations, and then be scored on this performance.

The evaluation of squad level performance throughout this phase of EIPSE hinged largely on subjective evaluations made by NCOs acting as platoon leaders in the scenarios. Although the LOI listed a series of items on which to evaluate the squads, most events required a subjective judgment by the evaluator as to whether the explicit "performance" was successfully accomplished.

Generalized checklists, used for the evaluations, should be expanded and refined to increase objectivity and performance orientation (Appendix G). The checklists should call for completion of easily identifiable tasks, not steps in a sequential procedure or process. Wherever possible, the existing checklists should be revised in this direction.

In addition to the above comments, it was noted that neither training manuals (TMs) for first echelon maintenance nor load plans for squad vehicles were in evidence during the tests. Unit Standing Operating Procedures (SOPs) should probably call for the preparation of these items and their retention in the tracks. The manuals would be used and field maintenance would improve if the troops understood that the appropriate objective checklists from the TMs are to be used in evaluation (routinely, as well as in tests). Load plans also should be developed and followed. These should specify for both equipment and personnel what should be present and how it should be secured. Accidents damaging expensive equipment and injuring personnel can result from failure to adhere to such SOPs.

d. Recommendations:

- (1) That situations for squad testing be expanded to include, to the greatest extent possible, all enemy weapons systems normally employed at battalion level and below.
- (2) That aggressor activity be enhanced by use of weapons effects simulation, casualty assessment techniques, and two-sided free play scenarios, e.g., SCOPES techniques.
- (3) That more emphasis be placed on detailed planning and rehearsals so essential to a successful patrol in actual combat.
- (4) That all equipment necessary to conduct a specialized mission be provided.
- (5) That more time be scheduled for each patrol to allow for "real time" planning and execution, and for accurate evaluation.
- (6) That consideration be given to using tested squads to provide opposing forces in patrol operations.
- (7) That all checklists for evaluation of unit proficiency be carefully reviewed to insure that they are aimed at objective terminal performance and are not just evaluations of the process leading to that performance.
- (8) That first echelon maintenance activities, vehicle loading plans, and leader navigation be included as test items in all EISPE unit evaluations.

## 2. Platoon Evaluation

a. Observations and Discussion: The 8th Infantry Division LOI required a number of situations for platoon contact and tactical activity as the basis for evaluation. These situations included platoon enemy contact and delay operations and night contact patrols on Day 6 of the exercise, and a daylight platoon attack on Day 7 of EISPE.

The total platoon was evaluated on its ability to conduct these activities within the limitations of the exercise. Exercises were two-sided, blank fire, aggressor-supported problems. The platoon enemy contact operation was intended to include live fire on a range setting, but this was canceled due to inclement weather.

Observations were made of all phases of the platoon exercises, and were supplemented with interviews and discussions with examinees, evaluators, and aggressor personnel. Extremely bad weather and low visibility due to fog presented a realistic setting for winter tactical operations. These same factors adversely affected both ARI observations and the ability of evaluators to judge the outcomes of engagements easily.

The engagements used in the tactical setting were appropriate to the EISPE concept and provided a test of all basic missions for a rifle platoon. These blank fire exercises requiring deployment and management of the elements of the platoon by the leader provide a fairly good test of the ability of the leader.

However, as mentioned in the discussion of squad tests, not all individuals get fully involved in the problem and few really perform "all-out" as they would have to in actual combat. Again, this lack of individual participation stems from a lack of realism and from there being no specific assessment of the efforts of the individual squad/platoon member. This concern will be discussed in a more general context below.

From the point of view of effective training and performance-oriented testing, the tactical situations as used in EISPE have some serious deficiencies. These deficiencies are not unique to EISPE, but are results of the methods of training and testing that have been employed by infantry units for many years.

The two-sided tactical engagements (tested unit versus an aggressor force) have traditionally been used in small unit evaluations. Such tests have always provided a fairly effective measure of a leader's ability.

Some of the most important functions of a leader include planning, coordination, and the request for various kinds of support. These behaviors may be observed and evaluated by an observer. However, these exercises are much less useful in determining the ability of the unit because leaders and individual soldiers do not react to an engagement as they would to actual combat.

Time after time, squads in these EIPSE exercises made contact with the aggressor with both elements in exposed positions and with no thought given to the use of cover and concealment.

On some occasions where fire and movement were attempted, individuals were observed running for 50 meters across open areas covered by automatic weapons fire. Leaders were consistently road-bound, often crested hills with their tracks when cover was available, and made no attempt to support maneuvering elements by fire (overwatch).

In addition, EISPE units did not apparently search the commanding terrain for antitank weapons when in a mounted role, evidently because they did not understand their vulnerability under these conditions.

These kinds of reactions are the normal products of the standard type of training/testing. They occur for two primary reasons: first, many of the weapons systems which normally would be present on the battlefield are either missing entirely or poorly simulated. Secondly, there is no objective and timely method for the assessment of individual weapons effects.

These deficiencies cause several related problems: When normal training/testing occurs with the absence of indirect fire, main tank guns, and antitank missile systems, leaders react to what is there; primarily small arms fire. They make decisions that would be considered foolish in an environment where the full range of weapons was present.

Soldiers rarely attempt to use individual skills they have been taught, primarily because they believe that their individual contribution will not make a difference to the outcome of the unit (the unit always wins, the aggressor always loses).

However, the most important problem is that participants at all levels learn very little from these engagements because the effects of their weapons and the enemy's weapons are not known. An individual who exposes himself while under effective fire in combat usually becomes a casualty. A leader who fails to coordinate his supporting weapons effectively will almost surely suffer excessive losses.

Therefore, providing situations where leaders and soldiers alike receive feedback, in the form of weapons systems effects in as closely simulated combat as possible, must be a major training/testing goal.

The Army has taken two major steps in recent years to reverse these training/testing difficulties. These steps are the development of the new Army Training and Evaluation Program (ARTEPs) and development of SCOPES and REALTRAIN by ARI with the support of the U.S. Army Combat Arms Training Board.

Utilization of these two advances within the context of EISPE would result in a much more relevant training device and a much more efficient evaluation and testing tool. It was strongly recommended by ARI that these be considered and that the philosophy and approaches of SCOPES and REALTRAIN be incorporated into the refinement and development of EISPE by the 8th Division.

Appendix G discusses the adaptation of SCOPES, Appendix H discusses REALTRAIN, to meet EISPE's needs and a discussion of the advantages and disadvantages of both methods.

ARI suggested that several things be added to the EISPE tactical situations to make them more realistic and more challenging. Aggressor activity could be improved by providing the aggressors with more weapons and weapon simulators. These could include command detonated mines, LAWs, 90 mm RCLRs, and grenade simulators.

Noise and backblast effects should be simulated to provide location indications. SCOPES techniques also should be introduced into these two-sided engagements to make kill assessments possible. Aggressors also should wear aggressor uniforms.

ARI further suggested that weapons should be integrated whenever possible into these exercises. Units must learn not only to employ these weapons correctly; they also must consider constantly how to counter them.

It is an insufficient test of adjustment of indirect fire to merely check whether a leader has requested this support. The requester should see the rounds and adjust them. He must learn to appreciate the time necessary to get his first rounds, and the difficulty in positioning himself to adjust them while also maneuvering his unit.

While this normally would be the duty of the mortar Forward Observer (FO), commanders should test their leaders' ability in this area because FOs will not always be present.

Two methods of simulation of indirect fire (for dismounted and mounted operations) are described in Appendix H. These methods give the commander a means to employ mortars or artillery accurately in two-sided training engagements in near real time.

If possible, the EISPE platoon test should be conducted in conjunction with a tank platoon, as recommended in the ARTEP. Combined arms operations observed by ARI at the Armor School, Ft. Carson, and at Wildflecken, clearly indicated that better understanding of the coordination required for such work is badly needed at the platoon level.

Even though doctrine calls for the tank platoon to be attached to the Company/Team, in practice the tank platoon will be interfacing with the rifle platoon; and each platoon leader requires this training/testing experience. In EISPE, the senior platoon evaluator could act as the team commander, providing the mission to both the tank platoon and rifle platoon.

The presence of other rifle platoons could be simulated. Doctrine is not violated with this organization. Essential coordination between platoon leaders could be conducted on the Team Frequency.

Consideration also should be given to having the platoon conduct a deliberate defense in which up to 24 hours are devoted to a complete preparation of a position to include overhead cover, Claymore, harrassing minefields, barbed wire, wire communications, and range cards.

This amount of time is required to display and evaluate these important skills. Few infantrymen have ever had the opportunity in training to put all of the available defensive resources to use in a single position.

Consideration should be given to eliminating the platoon live fire attack. Under present safety constraints, the only value of this exercise is the opportunity it gives soldiers to fire their basic weapons in a unit context.

Any resemblance to an attack that actually would be launched in combat is lost due to the necessity of conforming to safety regulations. Introduction of the Gatling gun rendered these stand-up, online assaults obsolete more than a century ago.

If range regulations permit, however, a live fire defense might be conducted that would accomplish an important tactical objective as well as providing a vivid demonstration of the platoon's fire power capabilities.

The platoon could be given a mission of hastily occupying a defensive position, then engaging multiple series of pop up targets. This would require leaders to exercise all the elements of fire control (rate of fire, distribution, etc.).

Another advantage is that the M60 and 50-caliber machine guns could all be employed in a very realistic support role. It might even be possible to engage some targets with the 90 mm RCLR.

b. Recommendations:

- (1) That two-sided free play scenarios using SCOPES methodology be employed whenever practical in EISPE tests.
- (2) That, to the extent possible, all weapons systems found on the modern battlefield be simulated in these test exercises.
- (3) That the platoon live fire exercise, if retained as part of the EISPE test, be conducted from the defensive position rather than the attack.
- (4) That major antitank and indirect fire weapons effects be included in all platoon blank firing tests.
- (5) That the platoon evaluations be conducted as a combined arms exercise (tank/infantry team), as suggested by ARTEP No. 7-45.
- (6) That sufficient time be allotted for the platoon to conduct a deliberate defense.

TROOP AND EVALUATOR OPINIONS OF EISPE

Brief questionnaires were used to assess troop and evaluator opinions of the EISPE concept and the field test as a personal and training experience. Appendix B contains the questionnaires and the tabulated results. The following is a brief summary of opinions.

EISPE was generally a "good" event for the platoon members. Their answers to the questionnaires repeated what they had told ARI staff members throughout the week. Generally, they thought the EISPE exercise was interesting, of real value to an Infantryman, and a (mostly) fair test of their skills. Individuals complained about some aspects, including the weather and the road march. But, many troops said that EISPE was the best field exercise in which they had ever been involved.

Questionnaire results show that the troops generally considered the EISPE concept a good approach to both testing and training. Again, comments from the soldiers confirmed this. One SGT said he felt that EISPE was the first chance he had been given to put everything together; it was like a culmination of all his Army training. This comment summarized the feelings of several of the troops.

Both the platoon members and the evaluators believed that EISPE testing was of considerable value to the individual soldier as a training device, regardless of whether the EIB was won or not. Platoon members said that the week provided good training and that they wished they had had such training before.

Several troops reported that they had never trained before on many of the EIB events. When the men compared the EISPE to other field exercises with respect to training value, EISPE was rated far superior.

Both the troops and the evaluators felt that the tactical setting for EISPE added greatly to both the EIB and the squad and platoon exercises. When asked specifically about the contribution of the tactical setting to the EIB, they stated that the tactical setting made the EIB better.

Three platoon members who won the EIB previously were asked whether the EISPE EIB test was easier or harder than the earlier EIB. Two said the EIPSE test was easier and one said it was harder. Two E6s who disagreed on this question were asked directly why the test was easier or harder. One SSG said the test was easier in EISPE because it eliminated the written tests, i.e., understanding of traditional Army operations, and concentrated on performance. The other said that the EIB test was harder without the written tests because completing them served to prepare the soldier for the specific requirements of the EIB performance tests (reference Appendix I).

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FM 5-25, Explosives and Demolitions.

APPENDIX A

TEST PLATOON DEMOGRAPHICS AND EIB SCORES

Demographic and Successes on First Attempt for Each EIB Subject

TESTERS	DEMOGRAPHICS			EIB SUBJECTS							
	TIME IN SERVICE (MONTHS)	TIME IN PLATOON (MONTHS)	PREVIOUSLY AWARDED CIB/EIB	GT SCORE	M16 RIFLE	M60 MACHINE GUN	50 C/L MACHINE GUN	45 CAL PISTOL	M16A1 CLAYMORE	1/4 LB. INT	LAND* NAV.*
1/LT	18	12		N/A	8	8	8	8	8	8	8
SFC	178	9	CIB	123	8	8	8	8	8	8	8
SSG	70	19	CIB/EIB	119	8	8			8	8	8
SSG	88	6	CIB/EIB	119	8	8	8	8	8	8	8
SSG	88	21	CIB/EIB	108	8	8	8	8	8	8	8
SGT	30	7		95	8	8	8	8	8	8	8
SGT	33	1	EIB	102	8	8			8	8	
SGT	52	1	CIB/EIB	93	8	8	8	*	8	8	8
SGT	53	9	CIB/EIB	99	8	8	8	8	8	8	8
SP4	32	1	EIB	87	8	8			8	8	8
SP4	14	1		92		8	8	8	8		
SP4	34	1	EIB	87	8	8	8	8	8		8
SP4	16	1		108	8	8			8		8
SP4	25	2	EIB	63	8	8	8	8	8		8
SP4	39	9	EIB		8	8			8		8
SP4	25	7	EIB	64	8	8	8	*	8		
PFC	8	4		106	8	8	8		8	8	
PFC	10	1		90	8	8			8	8	
PFC	12	7		116	8	8			8	8	*
PFC	25	3		105	8	8			*	8	8
PFC	24	7	EIB	90	8	8	8	8	8	8	8
PFC	28	1		101	8	8	8	*	8	8	8
PFC	25	2	EIB	84	8	8	8	8	8	8	8
PV2	5	2		84	8						8
PV2	15	5		116	8	8	8	*	8		8
PV1	8	1		84	8	8			*	*	*
N 26	26	26	14	24	26	26	26	21	25	24	24
X SUCCESSFUL (First Try)					96	96	58	62	96	64	75

\* SUBJECT NOT ATTEMPTED  
 \*\* NIGHT COURSE ONLY

1 Data contained in this table was received from the 2nd Bn 28th Inf on 8 Jan 75.

EIB SUBJECTS

TESTERS	HAND GRENADE	M 203 CO LNCER.	M 72A2 (LAW)	MINE FIELD	SEARCH	ADJUST FIRE	COVER CONCEALMENT	SIGNAL	FIRST AID	(NBC)	ROAD MARCH	*** FT TEST
I/LT	8		8	8	8	8	8	8	8		8	478
SFC	8	8	8	8	8	8	8	8		8		
SSG	8	8	8	8	8	8	8			8	8	
SSG	8	8	8	8	8	8	8	8		8	8	450
SSG	8		8	8	8	8	8	8	8		8	414
SGT	8		8	8	8	8	8					
SGT		8	8	8	8	8	8		8		8	
SGT	8		8	8	8	8	8				8	398
SP4		8	8	8	8		8			8		436
SP4		8	8	8		8	8	8	8	8	8	386
SP4		8	8	8	8	8	8	8	8	8		418
SP4		8	8	8	8	8	8		8	8		
SP4			8	8		8	8				8	418
SP4	8				8	8	8		8	8	8	
SP4		8	8		8		8		8		8	400
PFC	8	8	8	8	8	8	8	8			8	
PFC		8	8	8	8	8	8		8	8		
PFC	8	8	8	8	8	8	8		8		8	
PFC		8	8	8	8	8	8		8		8	
PFC	8	8	8	8	8	8	8	8	8	8	8	471
PFC		8			8	8	8		8			
PFC	8	8	8	8		8	8		8			
PV2		8	8	8	8		8		8			
PV2	8	8	8	8	8		8	8		8	8	
PV1	*	*	*	*	*	*	*	*	*	*	*	S
N 26	25	25	23	23	23	23	25	23	23	23	26	
X ****	52	76	91	88	88	80	100	32	60	44	61	

\*SUBJECT NOT ATTEMPTED  
 \*\*\*ONLY SCORES AVAILABLE  
 \*\*\*\*SUCCESSFUL (first try)

*Handwritten notes at the bottom of the page, possibly including a date or reference number.*

APPENDIX B

QUESTIONNAIRES AND DATA

EISPE Evaluator

The following questions are being asked to assist ARI in aiding the Eighth Infantry Division in assessment of the overall value and effectiveness of the EISPE concept. Your individual answers will be kept strictly confidential. No one other than ARI staff will review the questionnaires. We will summarize your responses and report them to Commanders responsible for implementation and evaluation of the EISPE concept.

1. My rank is: \_\_\_\_\_ 2. I participated in Evaluation of: Individuals \_\_\_\_\_  
 Squads \_\_\_\_\_  
 Platoon \_\_\_\_\_
3. I hold the EIB: Yes No  
 the CIB: Yes No
4. I served as: \_\_\_\_\_ during EISPE.
5. For the following questions, circle the number below the answer that best matches your opinion about each question or statement.

	<u>Very Little Extent</u>	<u>Little Extent</u>	<u>Some Extent</u>	<u>Great Extent</u>	<u>Very Great Extent</u>
a. To what extent do you think this exercise was a good training experience for the <u>individuals</u> you evaluated?	1	2	3	4	5
b. To what extent do you think the exercise was a good training experience for the <u>units</u> you evaluated?	1	2	3	4	5
c. To what extent do you feel the individual and unit evaluations was on things the Infantryman really needs to know?	1	2	3	4	5
d. To what extent do you think the evaluation was a "fair" test for the Infantryman?	1	2	3	4	5
e. To what extent do you think the evaluation was consistently applied, especially to individual tests?	1	2	3	4	5
f. To what extent do you feel that the tactical setting of EISPE adds to the value of EIB tests and unit tests?	1	2	3	4	5
6. Circle the word that best answers the question for you:					
a. Compare to other field exercises, as a training experience, this EISPE was:	much worse	worse	about same	better	much better
b. Compared to earlier EIB tests I have seen conducted the criteria and judgments used here were. . . .	much less fair	less fair	about same	more fair	much more fair
7. Did the tactical realism make the test <u>better</u> of <u>worse</u> ? (circle one.)					

**Platoon Member Questionnaire**

These questions are being asked to obtain your opinions of the EISPE exercise. Your feelings will be useful to us in evaluating the effectiveness and worth of the overall EISPE Concept. Your answers will be kept strictly confidential. No individual responses will be reviewed by anyone except ARI staff. We will summarize your responses and report them to Commanders responsible for EISPE.

1. My rank is: \_\_\_\_\_ 2. My Platoon position is: \_\_\_\_\_

3. For the following questions, circle the number that stands for your opinion pertinent to each question or statement. The "1" stands for the lowest value and the "5" stands for the highest value of the range of response.

	<u>Very Little Extent</u>	<u>Little Extent</u>	<u>Some Extent</u>	<u>Great Extent</u>	<u>Very Great Extent</u>
a. To what extent did you personally enjoy the last week's exercise?	1	2	3	4	5
b. To what extent did you personally benefit from this week as a training exercise?	1	2	3	4	5
c. To what extent do you feel the individual testing was on things an Infantryman really needs to know?	1	2	3	4	5
d. To what extent do you feel the unit testing was on things an Infantryman really needs to know?	1	2	3	4	5
e. To what extent do you feel you were adequately trained for the individual tests given?	1	2	3	4	5
f. To what extent do you feel you were adequately trained for the unit testing given?	1	2	3	4	5
g. To what extent do you think the test was a "fair" test for you as an individual?	1	2	3	4	5

4. For the following questions circle the word that answers the question for you - pick the best answer.

a. Compared to other field exercises, as a personal experience, this week's exercise was . . . . .	much worse	worse	about same	better	much better
b. Compared to other field exercises, as a training experience, this week's exercise was . . . . .	much worse	worse	about same	better	much better

5. Do you already have the EIB? Yes No Do you have the CIB? Yes No

6. If you have the EIB now, was this test easier or harder than when you won the EIB? (Circle the appropriate word)

EISPE Platoon Member Tabulations

	N	Very little extent			Very great extent		Average
		1	2	3	4	5	
<b>(3a) <u>Personal enjoyment</u></b>							
E1-E4	14	3	1	9	1	0	2.57
E5-01	7	0	1	4	1	1	3.29
<b>(3b) <u>Personal benefit</u></b>							
E1-E4	14	1	1	5	6	1	3.36
E5-01	7	0	0	2	4	1	3.86
<b>(3c) <u>Individual testing</u></b>							
E1-E4	14	0	0	4	6	4	4.00
E5-01	7	0	0	2	3	2	4.00
<b>(3d) <u>Unit testing</u></b>							
E1-E4	14	0	1	3	6	4	3.92
E5-01	7	0	0	2	4	1	3.86
<b>(3e) <u>Adequately trained-Individual</u></b>							
E1-E4	14	1	2	4	4	3	3.43
E5-01	7	0	1	3	3	0	3.29
<b>(3f) <u>Adequately trained-Unit</u></b>							
E1-E4	14	3	4	3	2	2	2.71
E5-01	7	0	2	2	2	1	3.29
<b>(3g) <u>"Fair" test</u></b>							
E1-E4	13	2	2	5	3	1	2.92
E5-01	7	0	0	2	4	1	3.86

**Platoon Member Tabulations**

	N	Much worse 1	2	About same 3	4	Much worse 5	Average
<b>(4a) <u>Comparison-personal</u></b>							
E1-E4	14	0	2	3	6	3	3.71
E5-01	7	0	1	0	3	3	4.14
<b>(4b) <u>Comparison-training</u></b>							
E1-E4	14	0	1	5	6	2	3.64
E5-01	7	0	0	0	5	2	4.29
<b>(5) <u>EIB</u></b>							
E1-E4	1						
E5-01	2						
<b><u>CIB</u></b>							
E1-E4				1			
E5-01				6			
<b>(6) <u>Easier</u></b>							
E1-E4	1						
E5-01	1						
<b><u>Harder</u></b>							
E1-E4				0			
E5-01				1			

EISPE Evaluator Tabulations

	N	Very little extent			Very great extent		Average
		1	2	3	4	5	
<b>(5a) <u>Good training-individual</u></b>							
01-03	8	0	0	0	2	6	4.75
E4-E6 Ind. eval.	15	0	0	6	7	2	3.73
E4-E7 Sqd. & Plt. eval.	9	0	0	1	5	3	4.22
<b>(5b) <u>Good training-unit</u></b>							
01-03	7	0	0	0	3	4	4.57
E4-E6 Ind. eval.	14	0	2	4	6	2	3.57
E4-E7 Sqd. & Plt. eval.	9	0	0	1	2	6	4.56
<b>(5c) <u>Useful to Inf.</u></b>							
01-03	8	0	0	0	2	6	4.75
E4-E6 Ind. eval.	15	1	1	2	7	4	3.80
E4-E7 Sqd. & Plt. eval.	10	0	0	1	4	5	4.40
<b>(5d) <u>"Fair" test</u></b>							
01-03	8	0	0	1	4	3	4.25
E4-E6 Ind. eval.	15	2	1	4	3	5	3.53
E4-E7 Sqd. & Plt. eval.	10	0	2	1	3	4	3.90
<b>(5e) <u>Evaluation consistently applied?</u></b>							
01-03	7	0	0	2	4	1	3.86
E4-E6 Ind. eval.	15	0	3	5	4	3	3.47
E4-E7 Sqd. & Plt. eval.	8	0	0	1	5	2	4.13

**EISPE Evaluator Tabulations**

	N	Very little extent			Very great extent		Average
		1	2	3	4	5	
<b>(5f) <u>EISPE adds to EIB?</u></b>							
01-03	8	0	0	0	1	7	4.88
E4-E6 Ind. eval.	15	2	0	3	4	6	3.80
E4-E7 Sqd. & Plt. eval.	10	0	1	1	2	6	4.30

	N	Much worse		About same		Much worse		Average
		1	2	3	4	5		
<b>(6a) <u>EISPE comparison-field</u></b>								
01-03	8	0	0	3	2	3		4.00
E4-E6 Ind. eval.	14	0	2	2	6	4		3.86
E4-E7 Sqd. & Plt. eval.	10	0	0	1	5	4		4.30

<b>(6b) <u>Criteria &amp; judgment</u></b>								
01-03	6	0	0	3	1	2		3.83
E4-E6 Ind. eval.	13	1	0	3	6	3		3.77
E4-E7 Sqd. & Plt. eval.	8	0	1	1	6	0		3.63

<b>(7) <u>Better?</u></b>			<b><u>Worse?</u></b>		
01-03	7		01-03		0
E4-E6 Ind. eval.	2		E4-E6 Ind. eval.		1
E4-E7 Sqd & Plt. eval.	10		E4-E7 Sqd. & Plt. eval.		0

<b>(8) <u>EIB</u></b>			<b><u>CIB</u></b>		
01-03	1		01-03		3
E4-E6 Ind. eval.	2		E4-E6 Ind. eval.		5
E4-E7 Sqd. & plt. eval.	2		E4-E7 Sqd. & plt. eval.		7

## APPENDIX C

### TACTICAL TECHNIQUES COURSE

Individual riflemen must make a variety of "tactical" decisions in combat. "Should I move from my present location to a ditch to my left or do I move at all?" is a common example. Even these relatively minor decisions are critical to the individual's survival and can impinge on his squad's success or failure. Appropriate experience to enable the correct choices can be acquired and tested only in an environment where the individual must integrate all of his tactical skills within the context of his unit (fire team or squad), against an enemy the effect of whose weapons can be objectively measured.

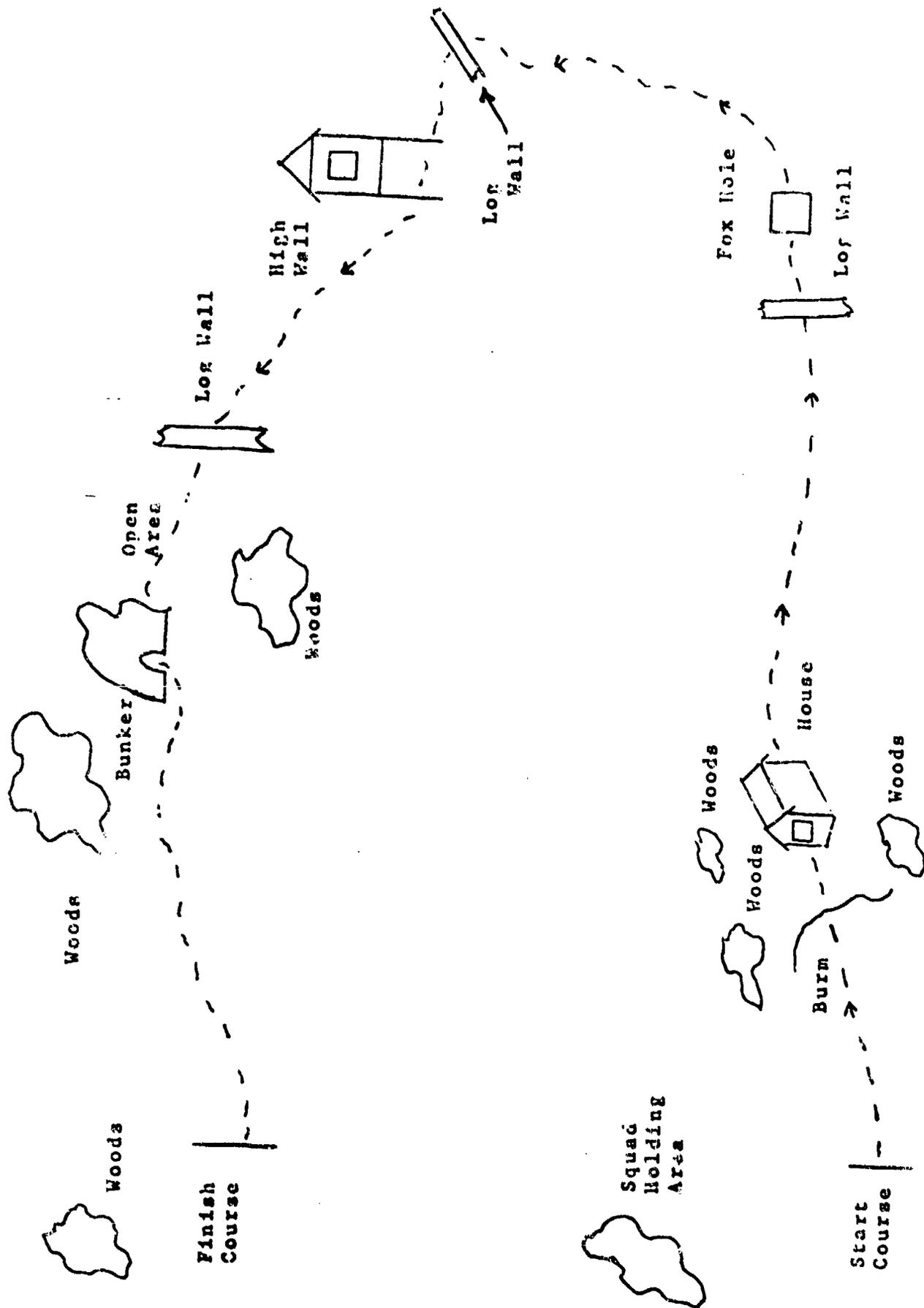
The following paragraphs describe a course which could be prepared and employed with little more effort than was required for the grenade assault course at Baumholder. It can provide an objective test of the critical behaviors presently tested in combat techniques, and cover and concealment, as well as hand grenades.

A series of targets, similar to those described in FM 23-30, could be established. Aggressors occupying each of the points would be equipped with numbers on their helmets and scopes on their rifles. The tested fire team (or squad if it is less than seven men) would negotiate the course together. ARI experience with this method of training indicates that one controller could easily evaluate the movements of individuals, particularly since he would watch the element through several events.

The leader of the element to be tested would be led to the first target area where his unit would be fired upon by aggressors. The evaluator (acting as the squad or platoon leader) would issue a frag order indicating that some of his team or squad would be stationed there to provide fire support while the tested element maneuvers on the target. An individual or two could be actually located on the first target area to provide this support and increase the realism. Having the aggressor fire does not usually pinpoint the position but gives the tested element a reasonable "fix" on the location. Some urgency can be built into the situation by indication that the rest of the platoon is being held up. The tested element maneuvers on the objective. If a tested fire team member is able to engage and "scope" an aggressor, the aggressor is "killed" using the procedures outlined in TC 7-2. (It is possible to eliminate the defensive controller and have the aggressors operate their own radio.) Because the members of the fire team have no way of knowing whether all resistance has been eliminated, they will be ordered to continue to maneuver to destroy the position with grenades. In the event that an aggressor "scopes" a fire team member, it will be noted by the evaluator but considered a superficial wound so that he will continue to maneuver with his element. This allows him eventually

to throw his grenade. Each man will maneuver close enough to the target to engage with a grenade so that he may be evaluated in this area. In order to test the individual's ability to control a fire team (i.e., the use of frag orders, hand and arm signals, formations), rotation into the leadership position could occur at each new target.

Criteria for the proper movement techniques and use of cover and concealment could be evaluated objectively by designating a maximum number of times that an individual could be "wounded" in the course and still pass. It is assumed that the course would be laid out so that a reasonably covered and concealed route ~~does~~ in fact exist. However, this could be determined by initial pretesting. Determination of ability to control a fire team through the use of frag orders and hand and arm signals would be a subjective judgment of the evaluator; however, in these situations it is usually clear when an individual is unable to function in this area.



HAND GRENADE ASSAULT COURSE

SCORING CRITERIA RECOMMENDED BY THE OCI (GRENADE COURSE)

<u>Criterion</u>	<u>Points (Max.)</u>
1. Did soldier have his ammunition?	5
2. Did soldier move through course aggressively?	6
3. Did soldier use Cover and Concealment?	10
4. Did soldier prefer cover to concealment whenever possible?	5
5. Was the soldier alert throughout the course?	3
6. Did the soldier react when fired upon?	10
7. Did soldier check to see where his target areas were?	3
8. Did soldier move aggressively under cover to a grenade throwing distance?	10
9. Did soldier use proper procedures to arm and throw his grenade?	5
10. Did soldier observe impact of each grenade?	3
11. Did soldier move aggressively and violently to check out impact area of each grenade?	25
12. Did soldier use proper positioning to cover impact area?	10
13. Did soldier hit each target on initial throw?	10
14. If left-handed, did the soldier throw grenade positioned upside down in his hand; conversely, if right-handed, did he throw grenade positioned upright in his hand?	10

TOTAL POINTS POSSIBLE = 115

PASSING SCORE = 70

APPENDIX E

CHECKLIST IN EISPE EVALUATION

SUBJECT: Demolitions Live Fire Checklist (EIB)

TEST SITUATION: "You are required to prime a block of TNT nonelectrically. All the tools and equipment needed to do this are in front of you. The time blasting fuse has already been timed and cut to the proper length. You must select the proper components for your charge, and then properly construct it."

EQUIPMENT: a. 1/4 lb block TNT  
b. time fuse  
c. M-2 cap crimpers  
d. non electric blasting cap  
e. M-60 fuse igniter  
f. M-1 priming adapter

PERFORMANCE: Did the Individual?

1. Properly identify and select the 1/4 lb block of TNT and M-2 cap crimpers.....
2. Puncture Weather Proof Cover.....  
(using M-2 cap crimpers)
3. Select one foot length of blasting fuse. (individual must measure fuse).....
4. CUT TIME BLASTING FUSE. (using cap crimpers cut off 1/2" from one of the open ends of the fuse to remove moisture.....
5. SELECT BLASTING CAP: (select one non electric blasting cap (M-6) Individual must hold the cap with index finger over the closed end and the thumb and right finger around the open end and inspect the well of the cap for any foreign matter.....
6. PUT CAP ON TIME BLASTING FUSE: Individual must properly place non electric blasting cap down over the freshly cut end of time blasting fuse.....
7. CRIMP BLASTING CAP: place the jaws of the M-2 crimper over the open end of the blasting cap. Crimp no more than 1/4 inch from open end while holding cap and fuse eye level at Arms length.....
8. PLACE BLASTING CAP IN TNT: place blasting cap into the cap well of 1/4 lb block of TNT.....
9. SECURE BLASTING CAP: secure blasting cap into cap well by using the M-1 priming adapter.....

10. PREPARE M-60 FUSE IGNITER: remove shipping plug from  
fuse igniter.....

11. CUT END OF TIME BLASTING FUSE: cut  $\frac{1}{2}$ " from end of time  
blasting fuse.....

12. INSTALL M-60 FUSE IGNITER: place the M-60 over the cut  
end of the fuse and tighten collar to form a weather proof seal.....

13. Move down range with prepared demolition. Place on target.  
remove safety pin. Pull ignition pin. Sound off "Fire in the  
hole!": Walk back to sand bag position.

**SUBJECT: M-18A1 Claymore Performance Checklist (EIB)**

**Ref: AR 672-12**

**TEST SITUATION:** At this station you will be required to circuit check, install, aim and fire the claymore mine. Your Squad Leader will issue you your claymore M40 tester and wooden stake.

**EQUIPMENT:** One live M-18A1 claymore complete with M40 circuit tester.

**PERFORMANCE #1: Circuit check.**

A. Test the firing device by connecting it to the test set. Place the safety bail in the fire position and smartly depress the firing handle, watching for a light in the test set. Connect and insuring all personnel are at least 10 feet from the blasting cap, smartly depress the firing device handle again. The flashing light indicates the firing circuit is good.....

B. Place the safety bail in the safe position. Disconnect the firing wire from the test set and replace the firing wire dust cover.....

C. Disconnect the test set from the firing device and replace remaining dust covers.....

**PERFORMANCE #2: Laying.**

A. Place the firing device on your person and move to the installation site.....

B. Rotate the legs of the Claymore downward and spread them for stability. Insuring the site labeled "FRONT TOWARD ENEMY" is to the front, press the legs firmly into the ground.....

**PERFORMANCE #3: Aiming.**

Aim the mine using the Claymore sight.....

**PERFORMANCE #4: Arming.**

A. Wrap the firing wire around a stake approximately 1 meter from the mine.....

B. Remove the priming adapter from the detonator well and slip the firing wire through the slit in the priming adapter.....

C. Insert the blasting cap into the detonator well and replace the priming adapter.....

PERFORMANCE #5: Recheck Aim.  
Recheck the lay and aim of the mine and move back to the firing position.....

PERFORMANCE #6: Firing.  
A. Connect the firing device to the firing wire..

B. Take cover.....

C. Fire the Claymore by moving the safety bail to the fire position and smartly squeeze the firing device handle.

TEST SITUATION CONTINUED: Now that you have completed the installation, disarm, retrieve and place the mine in the bandolier.....

**SUBJECT: MECHANIZED SQUAD REACTION COURSE**

1. Night Defensive Position: a. Did squads move into positions quietly? \_\_\_\_\_
  - b. Was security established (IP's)? \_\_\_\_\_
  - c. Were crew served weapons positioned? \_\_\_\_\_
  - d. Were individual positions assigned? \_\_\_\_\_
  - e. Was commo established with platoon HQ's? \_\_\_\_\_
  
2. Movement: a. Did squad leaders follow assigned routes? \_\_\_\_\_
  - b. Did squad leaders report crossing LD? \_\_\_\_\_
  - c. Did squad leaders report contact? \_\_\_\_\_
  - d. Did squads leave night defensive positions on time? \_\_\_\_\_
  
3. Enemy Ambush: a. Was proper immediate action taken? \_\_\_\_\_
  - b. Did squads move rapidly out of the kill by shortest route? \_\_\_\_\_
  - c. Did squads deploy to eliminate ambush? \_\_\_\_\_
  - d. Was a base of fire established? \_\_\_\_\_
  - e. Was fire and movement or fire and maneuver employed? \_\_\_\_\_
  - f. Did squads assault over entire enemy positions? \_\_\_\_\_
  - g. Were areas secured after assault? \_\_\_\_\_
  - h. Were teams organized to search enemy dead and care for friendly wounded? \_\_\_\_\_
  - i. Were reports made to platoon leaders? \_\_\_\_\_

4. Friendly Casualties: a. Was first aid applied to all wounded? \_\_\_\_\_

b. Were the four life saving steps employed? \_\_\_\_\_

c. Did squads accomplish their missions before giving attention to wounded? \_\_\_\_\_

d. Were squads able to function when casualties were inflicted? \_\_\_\_\_

e. Were reports made to platoon leaders? \_\_\_\_\_

f. Was medical assistance requested as needed? \_\_\_\_\_

g. Were preparations made to continue the mission? \_\_\_\_\_

h. Were the squads prepared to continue their missions when ordered to do so? \_\_\_\_\_

5. Crossing Major Roads: a. Was squad stopped in covered position on the friendly side of road? \_\_\_\_\_

b. Was a report made to platoon leader? \_\_\_\_\_

c. Was security placed on both flanks? \_\_\_\_\_

d. Was the near shoulder of roads checked for and cleared of all mines? \_\_\_\_\_

e. Was roadway checked for and cleared of mines? \_\_\_\_\_

f. Was the far shoulder of the road checked for and cleared of all mines? \_\_\_\_\_

g. Was security established on the far side of the road? \_\_\_\_\_

6. Squad Assembly Area: a. Was security established?(OP's) \_\_\_\_\_

b. Were crew serve weapons positioned? \_\_\_\_\_

c. Were individual positions assigned? \_\_\_\_\_

d. Were interlocking sectors of fire assigned? \_\_\_\_\_

e. Were fields of fire cleared? \_\_\_\_\_

f. Were range cards prepared in two copies and one copy forwarded to the squad leader? \_\_\_\_\_

g. Was camouflage used effectively?(both individuals and positions) \_\_\_\_\_

h. Was a squad fire plan made? \_\_\_\_\_

- i. Were battlesight zeros set and did the men know their battlesight zero? \_\_\_\_\_
- j. Was the squad APC placed in best possible position and camouflaged? \_\_\_\_\_
- k. Were post operation checks performed by driver? \_\_\_\_\_
- l. Did squad loader issue a warning order? \_\_\_\_\_
- m. Did team leaders supervise preparation for the attack in absence of squad loader? \_\_\_\_\_
- n. Did squad loader make a map recon? \_\_\_\_\_
- o. Did squad loaders operation order include:
- (1) Enemy situation
  - (2) Friendly situation
  - (3) Mission
  - (4) Execution
  - (5) Service support
  - (6) command and signal?
- p. Overall operations order rating? \_\_\_\_\_
- q. Did squad plan use of available time? \_\_\_\_\_

7. Enemy Minofield: a. Did squad leader report locations of minofield to platoon leader? \_\_\_\_\_

b. Was security posted? \_\_\_\_\_ C \_\_\_\_\_

c. Were limits of minofield marked? \_\_\_\_\_

d. Was squad properly organized to breach a path through minofield? \_\_\_\_\_

e. Were types of mines reported to platoon leader? \_\_\_\_\_

f. Did probers remove watches and rings along with rolling up shirt sleeves? \_\_\_\_\_

g. Did probers remove all magnetic gear such as helmets, pistol belts and individual weapons? \_\_\_\_\_

8. Gas Attack: a. Was an immediate warning of gas given? \_\_\_\_\_

b. Did the squad immediately and without hesitation mask? \_\_\_\_\_

c. Were masking procedures followed? \_\_\_\_\_

d. Was report made to platoon leader? \_\_\_\_\_

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- d. Was permission requested to unmask? \_\_\_\_\_
- e. Were proper unmasking procedures followed? \_\_\_\_\_
9. The Attack: a. Was squad dismounted in a covered position? \_\_\_\_\_
- b. When dismounted did squad make use of available cover and concealment during movement? \_\_\_\_\_
- c. Was the caliber .50 machine gun utilized for fire support? \_\_\_\_\_
- d. Did the squad leader form a fire support movement? \_\_\_\_\_
- e. Were fire and movement techniques used during the assault? \_\_\_\_\_
- f. Were supporting fires shifted? \_\_\_\_\_
- g. Was the assault carried over the enemy position? \_\_\_\_\_
- h. Was the position rapidly consolidated? \_\_\_\_\_
- i. Were defensive preparations made when ordered to hold in place? \_\_\_\_\_
- j. Did squad leader and team leader supervise the defensive preparation? \_\_\_\_\_
- k. Was ammo on hand redistributed and was a resupply requested as needed? \_\_\_\_\_
10. POW Handling: a. Were POW's secured? \_\_\_\_\_
- b. Were POW's separated? \_\_\_\_\_
- c. Were POW's thoroughly searched? \_\_\_\_\_
- d. Was enemy equipment thoroughly searched? \_\_\_\_\_
- e. Was POW handling accomplished with minimum amount of personnel? \_\_\_\_\_
- f. Was information compiled and reported to the platoon leader? \_\_\_\_\_
- g. Were POW's properly safeguarded from both hostile and friendly fires? \_\_\_\_\_
- h. Were arrangements made to assist movement of POW's to rear? \_\_\_\_\_

1. Were all weapons, equipment, and personnel effects tagged before being sent to the rear? \_\_\_\_\_

11. Subjective Evaluation: a. Were squad members responsive to their leader's orders? \_\_\_\_\_

b. Were squad members alert and aggressive? \_\_\_\_\_

c. Were tactically sound formations used? \_\_\_\_\_

d. Was the terrain properly utilized? \_\_\_\_\_

e. Was the squad proficient with its weapons? \_\_\_\_\_

f. Did squad operate as a team? \_\_\_\_\_

g. What did the squad do best?

h. What did the squad do worst?

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**SQUAD PATROL CHECK LIST**  
**EVALUATION CRITERIA**

1. Training Objective: To provide training and evaluation in the following areas:

- a. Assembly area procedures.
- b. Troop leading procedures.
- c. Squad leaders warning order, map recon, and operations order.
- d. Movement.
- e. Execution of mission (raid, recon and ambush).

2. Objective Evaluation.

a. Squad assembly area.

(1) Were battlesight zeros set and did the men know their battlesight zero?

(2) Were individual positions assigned?

(3) Was the squad's APC camouflaged?

(4) Were individuals camouflaged?

(5) Were interlocking sectors of fire assigned?

(6) Were post operation checks made by the driver?

(7) Were range cards prepared?

(8) Were range cards prepared in two copies and one copy forwarded to the squad leader?

(9) Was a squad fire plan made?

(10) Were OP/LP's established as needed?

(11) Did the squad leader issue a warning order?

(12) Did squad leader and team leaders supervise patrol preparations?

(13) Were squad members inspected for completeness of equipment?

(14) Did the squad leader select a covered and concealed route?

(15) Did the squad leaders order include:

(a) Enemy situation?

(b) Friendly Situation?

(c) Mission?

(d) Execution?

(e) Service Support?

(f) Command and Signal?

(16) Overall operations order rating \_\_\_\_\_ ?

b. Movement:

(1) Did the squad leave the assembly area on time?

- (2) Were proper formations utilized?
  - (3) Were sectors of responsibility assigned and utilized during movement?
  - (4) Was noise and light discipline maintained?
  - (5) Were hand and arm signals utilized?
  - (6) Were squad members responsive to directives?
  - (7) Did squad leader utilize team leaders to control movement?
  - (8) Were formations used as stated in Op Order?
  - (9) Were danger areas crossed or by-passed effectively?
  - (10) Were danger areas crossed or avoided as stated in the Op Order?
  - (11) Were rally points established on the near and far side of the danger area?
  - (12) Was front, rear and flank security established and maintained?
  - (13) Were rally points established along the route of march?
- c. Actions on the Objective (Raid)
- (1) Was an objective rally point established?
  - (2) Did the squad members understand it was the rally point?
  - (3) Did the squad leader make an effective leaders recon?
  - (4) Was the objective identified?
  - (5) Were the assault, security and search teams employed as stated in the operation order?
  - (6) Did the squad sweep the objective?
  - (7) Was the objective searched effectively?
  - (8) Was security around the objective effective?
  - (9) Was withdrawal from the objective rapid and organized?
  - (10) Was everyone accounted for at the objective rally point?
  - (11) Was information gathered disseminated to all squad members?
  - (12) Was ammunition re-distributed?
- c. Actions on the objective (RECON):
- (1) Was an objective rally point established?
  - (2) Did the squad understand it was the objective rally point?
  - (3) Did the squad leader make an effective leaders recon?
  - (4) Was the objective identified?
  - (5) Was the objective secured before the recon team moved?
  - (6) Were the security and recon teams employed as stated in the Op Order?
  - (7) Did the recon team observe the entire objective?

- (8) Was information disseminated to all squad members?
- (9) Was everyone accounted for at the objective rally point?
- (10) Was enemy contact avoided?

d. Actions on the objective (AMBUSH):

- (1) Was an objective rally point established?
- (2) Did the squad understand it was the objective rally point?
- (3) Did the squad leader make an effective leaders recon?
- (4) Was the ambush site secured before it was occupied?
- (5) Was the ambush site occupied rapidly with minimum noise and confusion?
- (6) Were sectors of fire and responsibility assigned?
- (7) Did the squad know the signal to initiate the ambush?
- (8) Was the ambush initiated effectively?
- (9) Was the majority of the enemy in the kill zone?
- (10) Was the ambush discovered before it was initiated?
- (11) Was the kill zone secured before it was searched?
- (12) Were all members of the enemy force killed before the kill zone was searched?
- (13) Did the assault team sweep over the kill zone and secure the far side?
- (14) Did the search team make a thorough search of the kill zone?
- (15) Were all enemy weapons and equipment destroyed?
- (16) Was withdrawal from the ambush site rapid and organized?
- (17) Were all personnel accounted for at the objective rally point?
- (18) Was all information disseminated?
- (19) Was ambush executed as stated in the Op Order?
- (20) Were teams utilized as stated in the Op Order?

## APPENDIX F

### LAND NAVIGATION COURSE

Successful navigation requires the integration of many skills: terrain association, use of a compass, estimation of distances, and familiarization, use of a compass, estimation of distances, and familiarization with map features. Visibility, the type of terrain, amount of vegetation, and even the individual's relative abilities in each of the above-mentioned skills, influence exactly how navigation is actually accomplished.

In a test environment we are really not concerned with how this is accomplished; we are primarily interested in determining if the individual can move from Point A to B in a given time frame and maintain his orientation en route.

This skill can be measured by simply using an orientation approach with one evaluator per fire team (5-7 men). A course is laid out with an appropriate number of legs over varied terrain. An instructor meets the fire team at the initial point where maps, compasses, protractors, and pace cords are issued.

Tested individuals are given the precise location of their starting point. The evaluator informs individuals to be tested that they will follow him (at a reasonably slow pace) on a general azimuth, which is not announced. No talking among the fire team is allowed during movement. Individuals are instructed to maintain their orientation during the route of march.

When the instructor reaches the end of the first leg (the location of which has been accurately verified), he will stop the fire team and require them to give him in writing the six digit coordinate (using 1:50,000 scale map) of that position. He then again informs all members of the fire team of the correct location of this point and then proceeds on the second leg.

A test of this nature would require that individuals integrate their abilities to use the compass, to pace, and to relate their maps to terrain. If desired, individuals could be evaluated on some of the tests outlined in AR 672-12 during the halts at the end of each leg. Criteria could be established on a percentage basis depending on the terrain and the length of the legs (as indicated for the compass course AR 672-12).

For instance, individuals could be allowed to be 100 meters off and still receive credit for passing that leg. Individuals could also be allowed to "miss" one leg out of the course and still pass this phase.

Exact criteria need to be established with some initial field testing. If it is felt that this test is too difficult to be appropriate for the EIB, a variation could be employed where the azimuth is announced at each leg and could be pre-plotted by the individuals.

ARI has used this method of testing as a successful training vehicle. The only difference is that the instructor announces the azimuth in advance and begins the initial legs by describing the terrain as they move and supervising the individual's use of the map and compass. He gradually reduces the amount of information he is providing and substitutes questions. Individuals in ATT have demonstrated the ability to identify their locations correctly with six digit coordinates to an accuracy of 50 meters with from 4 to 8 hours of this type of training.

## APPENDIX G

### REALTRAIN AND SCOPES IMPLEMENTATION INDIRECT FIRE SIMULATION IN MOUNTED OPERATIONS

From Section IV of Chapter 2, of TC 71-5, REALTRAIN.

Indirect fire may be placed accurately in real time during the conduct of mounted highly mobile operations, using an indirect fire controller operating from a 1/4 ton vehicle. This controller, who will act as the FDC and firing element, should have the following equipment:

1/4 ton truck w/2 net (transmit/receive) radio capability

clipboard w/acetate covered map of training area

compass

binoculars

grease pencils

CEOI

Any participant in the exercise may initiate a request for fire. He transmits his request over the FDC net (one frequency is established for each opposing force) to the forward observer in support of his company (indirect-fire controller). The initial request for fire must be complete before the mission is computed.

If the mission is approved, the indirect-fire controller will record the data and plot the "Impact" of the first round of his map, plot the observer-target azimuth, move to the location of the first round, and detonate an artillery simulator.

Because the indirect-fire controller must move throughout the problem areas, his vehicle must be clearly marked as administrative. All participants should be briefed to disregard this vehicle for purpose of exercise play.

Participants are not allowed to react to the presence of the vehicle, only to the presence of artillery simulators. The controller uses normal communication procedure for conducting a fire mission, (e.g., announcing SHOT-OVER and SPLASH-OVER).

The participant then transmits information to adjust the strike of the round. The controller will plot the adjustments as requested along the indicated observer target azimuth, move to the appropriate location, and detonate another artillery simulator.

When the participant requests fire for effect, the controller will detonate three or four simulators across an area realistically covered by that weapon's burst dispersion pattern. The controller with the maneuver element will assess casualties in accordance with the rules of engagement for indirect fire listed in Table 1 and report them over the control net (e.g., 49 and 74 HIT BY ARTILLERY or TRACK 62 DESTROYED BY ARTILLERY).

Smoke missions may be employed using the same procedures described above. Hand smoke grenades may be used in adjustment and smoke pots for fire for effect.

**Indirect Fire Simulation for Dismounted Operations**

**From Appendix C to TC 7-2 SCOPES.**

**CASUALTY AND DAMAGE ASSESSMENT RULES FOR INDIRECT-FIRE WEAPONS**

**B-1. 81-MM MORTAR**

a. 0-50 meters-Any exposed individuals are casualties. Vehicles lose radio communication.

b. 50-100 meters-Vehicles lose radio communication. The unit is suppressed and cannot engage for 5 minutes.

**B-2. 4-2-INCH MORTAR**

a. 0-50 meters-Any exposed individuals are casualties. Vehicles lose radio communication.

b. 50-100 meters-Any exposed personnel are casualties. Vehicles lose radio communication. Unit is suppressed and cannot engage for five minutes.

c. 100-150 meters-Any exposed individuals are casualties.

d. 150 meters or greater-No effect.

**B-3. ARTILLERY**

a. 0-50 meters-A tank or APC is immobilized with communications destroyed and all exposed personnel are casualties.

b. 50-100 meters-Any exposed personnel are casualties. Vehicles lose radio communications. The unit is suppressed and cannot engage for five minutes.

c. 100-150 meters-Any exposed personnel are casualties. The unit is suppressed and cannot engage for five minutes.

d. 150 meters or greater-No effect.

## APPENDIX H

### ADAPTING SCOPES PROCEDURES TO EISPE

The purpose of a training circular (TC) is to provide units in the field with training information and ideas on a timely basis and in a format that permits rapid implementation. For this reason a "keep it simple" approach is invariably used. The SCOPES TC is no exception. A single example (an attack/defense problem) is the only type of tactical operation which is discussed. However, this method of training/testing can be easily modified to accommodate virtually any mission expected of a rifle squad or platoon. The following paragraphs discuss how this system can be adapted for use in various EISPE situations. Some of the limitations of the method are also discussed.

In modifying SCOPES to a particular situation, it should be remembered that the method is merely a system for objectively determining the effects of weapons. Experience has shown that, if "hits" are not relayed within a 10-20 second time frame, the effectiveness of the training/testing is reduced considerably.

Generally speaking, one controller per fire team is the minimum level of personnel necessary to achieve this goal. As squads become more proficient (reach the point at which riflemen begin to operate as teams instead of individually), it may be possible to function with fewer controllers. Particularly in platoon level operations where squads are normally employed as single elements, this ratio may be reduced.

In a test situation, where small groups of aggressors occupy specific locations, it is feasible to have them act as their own control. The evaluator can easily monitor their activities as the offensive controller to keep them "honest." In some cases, a net control station to record casualties may not be needed.

Procedures for employing the M60 machine gun, mines, anti-tank, and tank weapons systems in these exercises are described in TC 7i-5, REALTRAIN. Copies of this publication were distributed to individuals attending the REALTRAIN course of instruction at Fort Knox, Ky. in December 1974. REALTRAIN equipment for one infantry battalion is located in Europe and designated by DCSOPS, USAREUR, for the 8th Infantry Division. If the training devices for the TOW, 90mm RCLR, and LAW are not available, evaluators should make every effort to assess subjectively the effects of these weapons.

Assessment can be done with controllers located with the weapon being fired and judging the probability of kills. Moving targets at extreme ranges would be assigned low probabilities, close in and stationary targets would have high probabilities. Noise and backblast effects of these weapons always should be simulated.

There are several limitations to the SCOPES and REALTRAIN methodologies. First, there is a fairly high controller requirement. The need for tactical radios to support the control system is substantial. The use of training ammunition, especially pyrotechnics, is increased. Some initial training is required for controllers, and all riflemen must have familiarization training with the six power scope for the M16A1 rifle. Because of the nature of casualty assessment procedures with all of these weapons, a greater premium is placed on concealment rather than cover, although this effect is greatly reduced if the full complement of weapons is employed in a given situation. These disadvantages, however, are adequately offset by the benefits realized in terms of unit proficiency using these procedures.

The question of objective criteria for using SCOPES to establish the absolute levels of proficiency of units has not been fully answered. It is still difficult to make these kinds of decisions strictly on a win/lose basis even if a 3:1 attack/defense ratio is employed. In these exercises there is necessarily a winner and a loser. Thus Unit A could defeat Unit B, indicating that A is better in a relative sense. However, in terms of actual proficiency, both may be highly qualified.

Even so, there is no doubt that, using SCOPES, commanders can have a much more valid and more objective data base from which to make judgments concerning their units. Units can also continue to be scaled on their level of technical sophistication using a checklist system similar to that used in the EISPE test.

APPENDIX I

COMPARISON OF EISPE INDIVIDUAL  
TESTING TO EIB REQUIREMENTS

EIB REQUIREMENTS (JAN 74)		Observed or Reported in <u>EISPE</u>
<u>Subject</u>	<u>Specific Tests</u>	
<u>M16A1</u>	Assembling/Disassembling	Yes
	Stoppage & Immediate Action	No
	Selection of Firing Positions	No
	Fire Commands	No
<u>.45 Cal Pistol</u>	Assembling/Disassembling	Yes
	Stoppage & Immediate Action	No
<u>M60 LMG</u>	Assembling/Disassembling	No
	Stoppage & Immediate Action	Yes
	Selection of Firing Positions	No
	Fire Commands	No
	Range Cards	No
<u>90mm RCLR</u>	Assembling/Disassembling	No
	Stoppage & Immediate Action	No
	Selection of Firing Positions	No
	Fire Commands	No
	Bore Sighting	No
<u>.50 Cal MG</u>	Assembling/Disassembling	No
	Stoppage & Immediate Action	Yes
	Fire Commands	No
	Range Cards	No

<u>Subject</u>	<u>Specific Tests</u>	<u>Observed or Reported In RISPE</u>
<u>Field Hygiene</u>	Clean Mess Gear	No
	Purify Water	No
	Waste Disposal	No
<u>Demo &amp; Mines</u>	Prime a Non-Electric Charge	Yes
	Identify AT/AP mines	Yes
	Emplacing & Arming M-14 AP Mine	No
	Employ & Arming M15 AT Mine	No
	Emplacing M16A1 w/trp wire	No
	Probing for Mines	Yes
	Identify Marking Signs	Yes
<u>Navigation</u>	Orienting Map Using Compass	No
	Plotting Eight Digit Coordinates	No
	Use of Map Legend	No
	Common Military Symbols	No
	Measurement of Map Distance	No
	Direction Using Sun	No
<u>Combat Techniques</u>	Methods of Observing	No
	Methods of Movement	Yes??
	Hand & Arm Signals/Formations (Squad)	No
	Hand & Arm Signals/Formations (Platoon)	No
<u>Military Intelligence</u>	SALUTE (reporting info)	No
	Handling POWs & Documents	Yes
<u>Indirect Fire</u>	Adjustment of Mortar Fire	Yes
<u>Individual Cover &amp; Concealment</u>	Definitions	No
	Emplacements	Yes
<u>NBC</u>	[Recognition of CBR Containers	
	[Markings for Contaminated Areas]	Yes
	Reaction to Unk Chemical Agent	Yes
	Reaction to NUCS	Yes
<u>Communications</u>	Phonetic Alphabet	No
	Signed Radio Operation	No
	PRC-77 Operation	Yes
	Transmit a Voice Msg/Authentication	Yes
	Install & Operate TA-312/PT	No
<u>Physical Fitness Test</u>	PT Test - Score of 400 (Part scores of 60)	No

<u>Subject</u>	<u>Specific Tests</u>	<u>Observed or Reported in EISPE</u>
<u>106mm RCLR</u>	Assembling/Disassembling	No
	Stoppage & Immediate Action	No
	Fire Commands	No
	Range Card	No
	Bore Sighting	No
<u>81mm Mortar</u>	Misfire Procedures	No
	Fire Commands	No
	FDC Procedures	No
	Mortar Gunners Exam	No
<u>4.2 Mortar</u>	Misfire Procedures	No
	Fire Commands	No
	FDC Procedures	No
	Mortar Gunners Exam	No
<u>Range Estimation</u>	Range Estimation	No
<u>Starlight Scope</u>	Mounting & Focusing Starlight Scope	No
<u>Hand Grenades</u>	Throwing Hand Grenades (Confidence Course)	Yes
<u>Claymore</u>	Setting up & Testing Circuit, Disarming & retrieving M13A1	Yes
<u>M203 GL</u>	Assembling/Disassembling	Yes
	Stoppage & Immediate Action	No
	Firing Positions (selection)	No
<u>M72A2 LAW</u>	Placing in Operation	Yes
	Taking out of Operation	No
	Misfires	No
<u>General Subjects</u>	Reporting to an Officer	No
	Challenging Guard (Interior)	No
	Challenging Guard (Exterior)	No
	General Orders	No
	Geneva Convention	No
<u>First Aid</u>	Life Saving Procedures	Yes
	Use of Dressings	Yes
	Improvised Splints	Yes
	Artificial Respiration	No

<u>Subject</u>	<u>Specific Tests</u>	<u>Observed or Reported in EISPE</u>
<u>Compass</u>	Day Compass Course	Yes
	Night Compass Course	Yes
<u>Road March</u>	Road March	Yes
<u>Wpns Qualification</u>	Expert in Individual Wpns Qualification	No

Of a total of 29 subjects in EIB, 18 were observed or reported in EISPE tests. Of the total of 90 individual tests in EIB, 27 were observed or reported in EISPE.