Six credit hours will be awarded for successful completion of this subcourse.

This subcourse contains three lessons on Staff Functions. In each lesson you will learn to perform a specific task required in carrying out your duties as a battalion staff officer.

In Lesson 1, Identify the Duties of a Staff Officer, you will achieve the following objective:

- **Task:** Identify the duties of a staff officer.
- **Condition:** Given extracts of doctrinal literature pertaining to the duties of a staff officer and a series of multiple-choice questions relating to 14 given situations.
- **Standard:** Correctly identify the responsible staff officer for given situations.

In Lesson 2, Organize a Battalion Tactical Operations Center, you will achieve the following objective:

- **Task:** Organize a battalion tactical operations center.
- **Condition:** Given extracts of doctrinal literature pertaining to the organization of a battalion tactical operations center and a series of multiple-choice questions relating to tactical reasoning or tactical situations.
- **Standard:** Correctly answer multiple-choice questions dealing with the organization of the tactical operations center.

In Lesson 3, Prepare an Operations Estimate, you will achieve the following objective:

- **Task:** Prepare an operations estimate.
- **Condition:** Given extracts of doctrinal literature pertaining to the preparation of an operations estimate, a map, overlays, a simulated tactical situation, a battalion task force operation order, an intelligence estimate, additional information in a continuation of the situation, and a series of multiple-choice questions relating to tactical reasoning or tactical situations.
- **Standard:** Correctly answer multiple-choice questions dealing with the format, technique, and mental process of making an operations estimate leading to the S3’s recommendation to the commander.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMINISTRATIVE INSTRUCTIONS</td>
<td>iv</td>
</tr>
<tr>
<td>GRADING AND CERTIFICATION</td>
<td>iv</td>
</tr>
<tr>
<td>LESSON 1: IDENTIFY THE DUTIES OF A STAFF OFFICER</td>
<td>1</td>
</tr>
<tr>
<td>Exercise 1: Identifying staff doctrine and procedures</td>
<td>1</td>
</tr>
<tr>
<td>Practical Exercise 1</td>
<td>2</td>
</tr>
<tr>
<td>Solutions for Practical Exercise 1</td>
<td>4</td>
</tr>
<tr>
<td>Exercise 2: Identifying staff organization and individual staff responsibilities</td>
<td>5</td>
</tr>
<tr>
<td>Practical Exercise 2</td>
<td>8</td>
</tr>
<tr>
<td>Solutions to Practical Exercise 2</td>
<td>12</td>
</tr>
<tr>
<td>EXTRACT OF ST 7-150 FY 79 AND FM 71-2</td>
<td>14</td>
</tr>
<tr>
<td>LESSON 2: ORGANIZE A BATTALION TACTICAL OPERATIONS CENTER</td>
<td>39</td>
</tr>
<tr>
<td>Exercise 1: Identifying the internal organization, functions, survivability measures, and efficiency techniques for the TOC</td>
<td>39</td>
</tr>
<tr>
<td>Practical Exercise 1</td>
<td>43</td>
</tr>
<tr>
<td>Solutions for Practical Exercise</td>
<td>46</td>
</tr>
<tr>
<td>Exercise 2: Locating the site of the TOC and arranging duty shifts</td>
<td>47</td>
</tr>
<tr>
<td>Practical Exercise 2</td>
<td>48</td>
</tr>
<tr>
<td>Solutions for Practical Exercise 2</td>
<td>50</td>
</tr>
<tr>
<td>EXTRACT OF ST 7-150 FY 79</td>
<td>51</td>
</tr>
<tr>
<td>LESSON 3: PREPARE AN OPERATIONS ESTIMATE</td>
<td>57</td>
</tr>
<tr>
<td>Exercise 1: Identifying the format for an operations estimate</td>
<td>57</td>
</tr>
<tr>
<td>Practical Exercise 1</td>
<td>58</td>
</tr>
<tr>
<td>Solutions for Practical Exercise 1</td>
<td>60</td>
</tr>
<tr>
<td>Exercise 2: Analyzing the mission and determining considerations affecting the possible courses of action</td>
<td>61</td>
</tr>
<tr>
<td>Practical Exercise 2</td>
<td>62</td>
</tr>
<tr>
<td>Solutions for Practical Exercise 2</td>
<td>64</td>
</tr>
</tbody>
</table>
## TABLE OF CONTENTS - Continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise 3: Developing, analyzing, and comparing courses of action</td>
<td>65</td>
</tr>
<tr>
<td>leading to recommendation</td>
<td></td>
</tr>
<tr>
<td>Practical Exercise 3</td>
<td>69</td>
</tr>
<tr>
<td>Solutions for Practical Exercise 3</td>
<td>78</td>
</tr>
<tr>
<td>EXTRACT OF ST 7-150 FY 79</td>
<td>81</td>
</tr>
</tbody>
</table>

* * * IMPORTANT NOTICE * * *

THE PASSING SCORE FOR ALL ACCP MATERIAL IS NOW 70%.
PLEASE DISREGARD ALL REFERENCES TO THE 75% REQUIREMENT.
Lesson 1
IDENTIFY THE DUTIES OF A STAFF OFFICER

The task taught in this lesson consists of:

- Identifying staff doctrine and procedures
- Identifying staff organization and individual staff responsibilities.

Task: Identify the duties of a staff officer.

Condition: Given extracts of doctrinal literature pertaining to the duties of a staff officer and a series of multiple-choice questions relating to 14 given situations.

Standard: Correctly identify the responsible staff officer for given situations.

EXERCISE 1: IDENTIFYING STAFF DOCTRINE AND PROCEDURES

Introduction

It is your duty as a staff officer to assist the commander in accomplishing his command responsibilities. To do so, you will use certain tools or procedures which include among others staff coordination, and staff writing.

Functions of the Staff Officer

Functions common to all staff officers include:

- Collection, analysis, and distribution of information
- Evaluation of all contingencies
- Anticipation of actions, events, and resource availability
- Informing others of needed information
- Making recommendations
- Preparation and issuance of orders
- Supervision of the execution of plans and orders.

Staff Procedures

Staff procedures are methods used to accomplish staff functions. They are the "how" of staff operations. Use of effective staff procedures expedites the accomplishment of staff actions and improves the quality of assistance provided to the commander.

A completed staff action is a staff officer's analysis of a problem, to include consideration of all feasible courses of action, and his solution presented in a finished form that the commander can approve or disapprove as a completed action. Emphasis is on the words "completed action" because of the tendency to present difficult problems piecemeal to the commander. It is a staff officer's duty to work out even the most perplexing details; not to ask the commander to do it. The commander wants answers, not questions. Most staff actions require coordination. Coordination within a staff is essential for two reasons: (1) to insure harmonious
staff action in carrying out the commander's plans and (2) to avoid conflicts and duplications by making necessary adjustments in plans and policies before their implementation. Other staff procedures include functional expertise, staff writing, administrative tools, reports, messages, voice radio FM, situation maps, and information displays.

Staff doctrine and procedures are described on pages 1-1, 1-2, and 1-7 through 1-9 from ST 7-150 FY 79. Extracts of these pages are located at the end of this lesson on pages 14 through 22 of this subcourse. Read them now before proceeding to Practical Exercise 1.

PRACTICAL EXERCISE 1

You have completed the instructional material for Exercise 1 and should now be able to identify staff organization and individual staff responsibilities. Check your ability to identify and apply the doctrine by answering the following questions. Answer as many questions as possible without looking back at any of the instructional material. The solutions will be found at the end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. The primary purpose of the staff is to:
   a. Maximize troop efficiency.
   b. Assist the commander.
   c. Continuously gather information.
   d. Prepare and issue orders.

2. As a staff officer one of your functions is to gather information in the commander's name. What are the other six basic staff functions?

3. The goal of the staff is to do everything possible to:

4. Define a completed staff action.

5. Why is coordination within a staff essential?
6. List from memory eight staff procedures or tools.

__________________________________  ______________________________

__________________________________  ______________________________

__________________________________  ______________________________

__________________________________  ______________________________
SOLUTIONS FOR PRACTICAL EXERCISE 1

1. b.

2. Evaluate all contingencies.
   Anticipation of actions, events and resource availability.
   Informing others of needed information.
   Making recommendations.
   Preparation and issuance of orders.
   Supervision of the execution of plans and orders.

3. Conserve the resources of the command.
   Maximize troop efficiency.
   Enhance troop performance.

4. A completed staff action is a staff officer's analysis of a problem, to include consideration of all feasible courses of action, and his solution presented in a finished form that the commander can approve or disapprove as a completed action.

5. To insure harmonious staff action in carrying out the commander's plans. To avoid conflicts and duplications by making necessary adjustments in plans and policies before their implementation.

6. Staff coordination. Reports.
   Function expertise. Messages.
   Staff writing. Voice radio FM.
   Administrative tools. Situation maps and information displays.
EXERCISE 2: IDENTIFYING STAFF ORGANIZATION AND INDIVIDUAL STAFF RESPONSIBILITIES

Introduction

At battalion and brigade levels there are two types of staff officers: The unit or principal staff and the special staff. This subcourse will emphasize the duties of the unit staff, specifically the S1, S2, S3, and S4. To identify the duties or individual responsibilities of a staff officer, specific Army doctrine has been established. This doctrine is contained on pages 1-2 through 1-6 and 2-1 through 2-4 from ST 7-150 FY 79. An extract of these pages is located at the end of this lesson on pages 23 through 26 of this subcourse. Read these extracted pages now, before proceeding with the exercise.

Staff officers are assigned staff responsibility for accomplishing staff actions. The assignment of staff duties for a particular activity improves efficiency by:

- Giving the commander a single staff agency for advice and assistance in a particular functional area
- Giving staff and subordinate elements of the command a commander's representative with whom they can coordinate or consult on a particular functional area
- Insuring that all command interests receive staff attention
- Enabling staff officers to give their complete attention to a manageable portion of command interests.

The assignment of staff duties carries no connotation of command authority over other staff officers or over any other elements of the command. The commander normally delegates authority to the staff to take final action on matters within command policy. The authority he delegates to individual staff officers varies with the level and the mission of the command, the immediacy of operations, the relationship of the staff officers area to the primary mission of the command, experience and personal relationships. When the commander authorizes staff officers to issue orders in his name, he retains responsibility for these orders.

Staff Organization

At battalion and brigade levels, there are two types of staff groupings: the unit staff and the special staff. The principal staff officers of the unit staff are the S1 (Personnel), S2 (Intelligence), S3 (Operations), S4 (Logistics) and when authorized the S5. The executive officer (XO) acts as the supervisor of these principal staff officers. The special staff is made up of officers who assist the commander and unit staff with technical, administrative, and branch matters, such as the communication electronics officer.

Unit Staff Officers

*The battalion S1.* The duties of the battalion S1 are:

- Securing all information on personnel activities within the command, for the benefit of the commander and other staff members.
- Providing estimates on unit personnel strength, and advising on personnel matters, to the commander.
• Preparing personnel plans.
• Translating all decisions regarding personnel matters into orders and then supervising the execution of all orders and plans pertaining to personnel.
• Coordinating all personnel matters and activities for the commander.
• Making recommendations to the commander for changes in plans and orders pertinent to personnel matters within the unit.
• Maintenance of unit strength. Preparing strength reports; casualty reports; collecting and recording radiation exposure data.
• Personnel management. Planning, coordinating and supervising all matters pertaining to the evacuation of prisoners of war.
• Maintenance of Morale. Maintaining a sound personnel service program by using techniques of leaves, passes, and rotation; preparing plans for postal service and establishing the unit athletic and recreation program in coordination with other personnel; supervising the operation of the Army Exchange (PX) Service within the battalion; processing recommendations for awards and decorations; planning, coordinating and supervising all grave registration activities.
• Maintenance of discipline, law, and order. Maintaining an up-to-date military justice policy file, preparing court-martial orders; through HQ's Commandant supervising control of stragglers.
• Headquarters management. In conjunction with the S3, S4, HQ's Commandant and the C-E officer, selecting the CP site and planning the internal arrangement of the elements of the CP.

**The battalion S2.** The duties of the battalion S2 are:

• Providing the commander and the staff with intelligence information, and submitting conclusions and recommendations based upon this information.
• Preparing intelligence reports and the intelligence portion of operation plans and reports.
• Planning for the continuous production of combat intelligence.
• Planning for and providing effective counterintelligence measures for the command.
• Providing all the needed intelligence training and required security measures within the command.
• Organizing for continuous operations during combat by mutual arrangement with the S3; even performing S3’s duties when necessary.
• Conducting and supervising all security control measures; employing detection measures to expose and neutralize the enemy intelligence effort including aerial and ground reconnaissance; and establishing challenge and password techniques.
• Preparing intelligence estimates using a logical five-paragraph format.
• Conducting combat surveillance. Planning all recon patrols; selecting the general location of the ground OP(s); training the intelligence section personnel and the intelligence specialists; monitoring the requisitioning and distribution of all maps and aerial photos.
• Preparing and maintaining intelligence reports, intelligence summaries (INTSUM), surveillance plans, and patrol plans.
**The battalion S3.** The duties of the battalion S3 are:

- Continuously studying the unit requirements.
- Recommending modification of the organizational structure of the unit and the Table of Organization and Equipment (TOE).
- Recommending priorities for the allocation of personnel and equipment.
- Planning the organizational structure and command relationship for all combat missions and operations including attachment, operational control, and support.
- Organizing the S3 section for combat operations and in coordination with the S2 organizing the S2-S3 sections of the TOC.
- Supervising the TOC during combat and recommending employment of all units and personnel in a manner best suited to accomplish the mission.
- Preparing operations estimate.
- Preparing operations order/plan and overlay.
- Assisting in issuing the operations order/plan following approval.
- Supervising the administration and execution of the operation order/plan within the battalion.
- Planning all tactical troop movements.
- Maintaining the troop list.
- Preparing and maintaining all operational records and reports, including those required on a permanent basis for record or policy purposes and those required on a day-to-day basis for current operational purposes. Examples include: situation reports, spot reports, and SOP's.
- Preparing the unit training program.

**The battalion S4.** The duties of the battalion S4 are:

- Providing the commander with information on all logistical matters, making recommendations for all logistical support, and preparing the logistical estimates and logistical administrative plans within the command.
- Exercising operational responsibility for the battalion trains.
- Providing all necessary maintenance and services for the command.
- Determining the supplies needed and the supply requirements for the battalion.
- Determining transportation requirements for the men and materiel within the command in support of logistical operations.
- Designating general areas for the location of trains elements and determining the size of the trains; selecting battalion supply route; providing ammunition and fuel resupply in manner best suited to tactical situation; providing for rear security in the trains area; determining the number of light rescue and decontamination squads; providing for emergency food, clothing, and water for personnel in the affected area; providing for medical treatment and evacuation of personnel in the affected area.
- Supervising vehicular and equipment maintenance; disseminating feeding instructions; insuring proper sanitation measures are observed.

**Overlap of Responsibility**

The assignment of individual staff responsibility is a blend of doctrine and command decision. Since the staff works together, the areas of responsibility and the
specific duties of the staff often overlap. To identify the responsible staff officer it is important to keep in mind the particular action taking place. For example, TOE allocates personnel and equipment for combat operations. The procurement of the equipment is a logistical consideration and falls under the responsibility of the S4. The procurement of personnel is, the responsibility of the S1; however, if any changes are recommended for the allocation of personnel or equipment, it would be an organizational consideration and would be the responsibility of the S3. As you can see, the area of responsibility for personnel is not exclusive to the S1. Nor is equipment the exclusive responsibility of the S4. Areas of responsibility overlap among all members of the staff.

Pages M-1 through M-12 from FM 71-2 describe the traditional staff relationships and the overlap of responsibility for common tasks accomplished at the battalion/task force level. Extracts of these pages are located at the end of this lesson on pages 27 through 38 of this subcourse. Read them now before proceeding to Practical Exercise 2.

**PRACTICAL EXERCISE 2**

You have completed the instructional material for Exercise 2 and should now be able to identify staff organization and individual staff responsibilities. Check your ability to identify and apply the doctrine by answering the following questions. Answer as many questions as possible without looking back at any of the instructional material. The solutions will be found at the end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. The S1 has staff responsibilities for ______________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________.

2. The S2 has staff responsibilities for ______________________________________________
   ____________________________________________________________________________.

3. The S3 has staff responsibilities for ______________________________________________
   ____________________________________________________________________________.

4. The S4 has staff responsibilities for ______________________________________________
   ____________________________________________________________________________.

5. The special staff at battalion includes the headquarters commandant chaplain (if attached),
   ____________________________________________,
   ____________________________________________,
   ____________________________________________,
   ____________________________________________,
   motor officer and two liaison officers. ____________________________________________
6. Matching: In the blank before each element of Column I, place the number of the corresponding alternative of Column II. Each number may be used more than once.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ Strength reports</td>
<td>1. S1</td>
</tr>
<tr>
<td>__ Surveillance plan</td>
<td>2. S2</td>
</tr>
<tr>
<td>__ CEOI Index</td>
<td>3. S3</td>
</tr>
<tr>
<td>__ Operation orders (issue)</td>
<td>4. S4</td>
</tr>
<tr>
<td>__ Intelligence estimates</td>
<td>5. Special staff</td>
</tr>
<tr>
<td>__ SOP’s</td>
<td></td>
</tr>
<tr>
<td>__ Logistical estimates</td>
<td></td>
</tr>
<tr>
<td>__ Unit training program</td>
<td></td>
</tr>
</tbody>
</table>

7. As a battalion S1 it is your duty to prepare:
   b. Intelligence reports.
   c. Personnel plans.
   d. Operational records.

8. As a battalion S2 k is your duty to provide:
   a. Estimates on personnel strength.
   b. The commander with information on all operational matters.
   c. All necessary maintenance and services for the command.
   d. All needed intelligence training within the command.

9. As a battalion S3 it is your duty to:
   a. Supervise the TOC during combat.
   b. Determine the supplies needed for the battalion.
   c. Provide the commander with intelligence information.
   d. Secure all information on personnel activities.

10. As a battalion S4 it is your duty to:
    a. Prepare intelligence estimates.
    b. Determine the supplies needed for the battalion.
    c. Provide estimates on unit personnel strength.
    d. Recommend modification of the organizational structure of the unit.

11. What information does the S2 provide to the S1 which may affect evacuation or hospitalization plans? ____________________________________________
12. The battalion S2 requests weather information from brigade and disseminates the information as part of his intelligence responsibility.
Why does the S1 analyze weather information?
___________________________________________________________________________

The S3?
The S4?
___________________________________________________________________________

13. What does the S2 provide the S3 with to prepare the operation estimate?
___________________________________________________________________________

What information do the S1 and S4 give the S3 to prepare the operations estimate?
___________________________________________________________________________

14. What transportation requirements do the S1 and S3 provide to the S4? ________________
___________________________________________________________________________

15. Describe the staff relationships as they pertain to prisoners of war.
___________________________________________________________________________
___________________________________________________________________________

In a memo from the commander, the following information is asked for:

- Request 1 - Current challenge and password
- Request 2 - Up-to-date military justice file
- Request 3 - Size of combat trains
- Request 4 - Troop list
- Request 5 - Location of the ground OP
- Request 6 - Court-martial orders
- Request 7 - Recommended changes to the TOE
- Request 8 - Feeding instructions.

Use these requests to answer questions 16 through 19.

16. As the S1, you will prepare the information for Requests:
   a. 1 and 3.
   b. 2 and 4.
   c. 2 and 6.
   d. 4 and 5.

17. As the S2, you will prepare the information for Requests:
   a. 1 and 4.
   b. 3 and 7.
   c. 1 and 5.
   d. 4 and 8.
18. As the S3, you will prepare the information for Requests:

   a. 2 and 6.
   b. 4 and 7.
   c. 4 and 5.
   d. 3 and 7.

19. As the S4, you will prepare the information for Requests:

   a. 3 and 7.
   b. 1 and 4.
   c. 4 and 5.
   d. 3 and 8.
SOLUTIONS FOR PRACTICAL EXERCISE 2

1. Maintenance of unit strength; personnel and manpower management; morale; health services; discipline, law and order; headquarters management; and miscellaneous administrative duties.

2. Intelligence; counterintelligence; and intelligence training.

3. Organization; operations; and training.

4. Supply; movements; maintenance; and services.

5. Communications - electronics (C-E) officer.
   Scout platoon leader.
   Mortar platoon leader.
   Antitank platoon leader.
   Redeye section leader.
   Medical platoon leader.
   Support platoon leader.

6. 1.
   2.
   5.
   3.
   2.
   3.
   4.
   3.

7. c.

8. d.

9. a.

10. b.

11. Information on the enemy situation and capabilities and characteristics of the area of operations.

12. For effect on health of personnel; for effect on operations and training; for effect on logistics activities.

13. The intelligence estimate and analysis of area of operations. The S1 informs S3 of capability to support mission, personnel limitations, and may recommend course of action from personnel viewpoint. The S4 informs S3 of logistics limitations and of capability to support mission, and may recommend course of action from a logistics viewpoint.

14. S1 provides S4 with requirements on transport of replacements and PW's. S3 provides S4 with requirements for transportation for training and tactical purposes.
15. The S1 plans for and supervises custody, administration, utilization, and treatment of prisoners of war.
The S2 estimates the number and capture rate of PW's; insures screening and initial interrogation of selected PW's.
The S3 considers requirements for troop units as guards for large numbers of PW's; coordinates MP support.
The S4 provides feeding, emergency clothing, and transportation; and coordinates evacuation.

16. c.

17. c.

18. b.

19. d.
COMMAND AND STAFF PROCEDURES

Section I. GENERAL

1-1. OBJECTIVE. This part of the Operations Handbook is designed to serve as a reference for the U.S. Army Infantry School resident and nonresident students on staff doctrine, staff organization, individual staff responsibilities and staff procedures.

1-2. SCOPE.
   a. The material contained herein is applicable to instructional problems covering peacetime operations as well as problems covering cold war, limited war, and general war to include internal defense and development (IDAD) operations.
   b. The information provided relates primarily to staff operations at battalion and brigade. Staff operations at all levels are similar.

Section II. STAFF DOCTRINE (Command and Staff Relationship)

1-3. COMMAND.
   a. Command is the authority that a commander in the military service exercises over his subordinates by virtue of his rank or assignment. Command includes the authority and responsibility for effectively using available resources, planning, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions. Command also includes responsibility for health, welfare, morale, training, and discipline of assigned or attached personnel. See Figure 1-1
   b. The commander alone is responsible for all that a unit does or fails to do. He can delegate authority but not responsibility. He is assisted in performing command functions by assistant commanders and a staff. In larger units it is physically impossible for the commander to personally handle to numerous tasks associated with the efficient management and control and still command the unit effectively. Therefore, he must delegate performance of some of his duties to staff officers. This does not relieve the commander of responsibility for everything his unit (including the staff) does or fails to do.
   c. The commander discharges his responsibility through an established chain of command which is the succession of commanding officers from superior to subordinate and vice versa. The commander commands the staff, but the chief of staff or executive officer directs and supervises it. The staff is not in the chain-of-command, however, staff officers act for the commander as he directs or delegates.

1-4. STAFF.
   a. The primary purpose of a staff is to assist the commander in the dispatch of his command responsibilities. To accomplish this, staffs or staff officers are assigned specific areas of responsibility and delegated the authority to take final action on matters within command policy in their respective areas. The complexity and tempo of combat operations prevent a commander from personally accomplishing or even supervising all of the tasks involved in the employment of his unit. Thus a staff which possesses a thorough knowledge and understanding of the commander’s concepts and mode of operation is capable of operating with complete confidence in the commander’s absence. This kind of efficiency frees the commander to devote more of his attention to maintaining personal contact with his fighting headquarters and/or fighting elements. The staff, like the commander, must understand the units of the command; their situations, capabilities, limitations, and character. The goal of the staff is to do everything possible to conserve the resources of the command, maximize troop efficiency, and enhance troop performance.
   b. Basic staff functions are: Gather information in commander’s name, appraise, anticipate, inform, recommend, order, and supervise.
      1) Staff sections must continuously collect, collate, analyze, and disseminate information. Information is gathered from all available sources; it is the result of a plan-not chance. This information must be rapidly processed to provide the commander with data that is pertinent and in a useable form for decision making. It must be quickly and carefully disseminated within the staff and to units that need it without disclosing the information to the enemy.
      2) The appraisal process is continuous. It is based on all available information. Staff appraisals are expert evaluations which consider all contingencies that may affect a planned course of action. Staff appraisals are presented informally to the commander, as required.
      3) The staff anticipates the commander’s actions. It also anticipates the enemy’s actions and the flow of the battle. It is normal procedure for the staff to anticipate events and the availability of resources, thus helping the commander to reduce reaction time when changes in the situation occur.
      4) The staff informs the commander; other members of the staff, and subordinate, adjacent, and higher headquarters through formal military briefings (Chapter 14) and informal meetings. The information provided is timely and oriented to the needs of the recipient.
      5) The staff makes recommendations to the commander as to policy, and as to actions to be taken and orders to be issued. They produce alternatives and list tradeoffs. These recommendations follow informal and timely staff coordination. They cue the commander on when to change the mission, the operating area, forces assigned, or priority of resources.
      6) The staff prepares and issues the orders for the commander to ensure that all necessary details are coordinated and actions are initiated according to his plan. Warning orders alert elements and provide time to prepare for action. Fragmentary orders effect change to basic plans and orders and provide implementing instructions to changes in the situation.
15

Section III: STAFF ORGANIZATION

1-5. GENERAL. At battalion and brigade levels there are two types of staff groupings: the unit staff and the special staff.

a. Unit Staff. The unit staff consists of the executive officer, S1 (Personnel), S2 (Intelligence), S3 (Operations), S4 (Logistics), and when authorized, S5 (Civil-Military Operations). They are principal assistants to the commander, have broad fields of interest, and exercise staff supervision over the activities of the special staff.

b. Special Staff. The special staff consists of staff members who assist the commander and unit staff in professional, technical, and other functional areas included in, but narrower than, the broad fields of interest of unit staff officers. They are mostly related to technical, administrative, and branch matters.

1. The special staff at battalion includes the headquarters commandant, chaplain (if attached), scout platoon leader, communications-electronics (C-E) officer, mortar platoon leader, antiaircraft platoon leader, reeve section leader, medical platoon leader, support platoon leader, motor officer, and two liaison officers. The battalion fire support officer (FSO) is normally from the field artillery battalion in direct support of the brigade. When no field artillery officer is available, the mortar platoon leader is the fire support officer under unit staff supervision of the S3. The commanders of combat, combat support, or combat service support units that are attached, under operational control (OPCON), or direct support (DS) serve as special staff officers to the battalion commander and staff on matters pertaining to the employment of their units.

2. The special staff at brigade consists of the headquarters commandant (headquarters and headquarters company commander), chaplain, chemical officer, C-E officer aviation officer, surgeon, two (when augmented), liaison officers. When combat support and combat service support units are attached to, under operational control of, or in direct support of the brigade, commanders of these units may be brigade special staff officers for their fields of interest if a special staff officer is not assigned in this area. For example, the commanding officer of an attached or supporting engineer company is the brigade staff engineer. The commander or his representative of the field artillery battalion in direct support of the brigade is the brigade fire support officer (FSO).

c. Organization. For organization of battalion and brigade staffs, see Figures 1.2 and 1.3. Note that the commander commands each staff group, that the executive officer coordinates and supervises the staff, and that the unit staff coordinates and supervises special staff officers whose functions pertain to their area of responsibility. The battalion and brigade unit staffs are considered action or implementing staffs when compared to the division coordinating staff.

d. Separate Brigades. The command and staff structure of separate brigades is similar to the division staff, because of the necessity to be in administrative and logistical functions to a greatest degree than divisional brigades. The brigade commander should specify responsibilities of the deputy brigade commander and his relationship to the brigade staff. Separate brigade staff consists of a unit and staff staff with functional areas of staff responsibility that parallel the corresponding staff sections at division. The unit staff of a separate brigade, like the coordinating staff of a division, is concerned with the broad aspect of planning and coordinating brigade activities. In addition, the brigade commander's aide and selected special staff officers who normally have direct access to the brigade commander (PAO, SJA, IG, other) constitute a personal staff group similar to the comparable grouping at division level. See Figure 1.4 for the staff organization of a type separate brigade.

Section IV: STAFF RESPONSIBILITY

1-6. UNIT STAFF.

a. Executive Officer. The executive officer (XO) is the principal assistant to the commander. Although he may assume command in the temporary absence of the commander, he is not in chain of command. As the coordinator and supervisor of the staff he is responsible for the execution of staff tasks and the coordinated efforts of its members. He insures that the staff performs as a team and not as separate staff sections. He assigns definite responsibilities and transmits the commander's decisions to the staff and to subordinate commanders when applicable in the name of the commander. This does not preclude, staff members dealing directly with the commander. However, a staff officer is obligated to inform the executive officer of instructions or requirements received from the commander. During the commander's temporary absence, the executive officer represents him and directs actions in accordance with his policies. He must be prepared to assume command at any time. He is responsible for the establishment of liaison and liaison activities. As an additional duty, he is responsible for the information program and is the Materiel Readiness Officer. The executive officer's duties, in the final analysis, are based on the desires of the commander.

b. The S1 (Adjutant). The S1 has staff responsibilities for maintenance of unit strength, personnel and manpower management, morale, health services, discipline, law and order, headquarters management, and miscellaneous administrative duties not assigned to another staff officer. He is responsible for all strength reports. He has staff responsibility for letters of sympathy. After coordination with the S3 on priorities, he recommends distribution of replacements to the commander. Promotions, reductions, eliminations and classification actions are monitored by the S1. He advises the commander on military justice matters. He has staff responsibility for development and maintenance of morale to include personnel services, medical services, and graves registration. Through the Headquarters Commandant, he supervises control of stragglers, handling and evacuation of POW's and CP security. The S1, after receiving the general CP location from the S3, selects the exact site in coordination with C-E Officer and Headquarters Commandant. He is also responsible for interior arrangements of the CP and functioning of the quartering party. Maintenance of the unit journal, policy files, individual radiation exposure data, and the personnel estimate are a few of his miscellaneous duties. Ref: ST 7-150-101.3.

"Company Commander and Staff Officer Handbook."
<table>
<thead>
<tr>
<th>PLANNING</th>
<th>ORGANIZING</th>
<th>DIRECTING</th>
<th>COORDINATING</th>
<th>CONTROLLING</th>
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<tr>
<td>1. study decision and situation in detail, including limitations.</td>
<td>1. Determine functions required to accomplish the mission.</td>
<td>1. Determine the extent of direction necessary by considering the type of operation, the type of organization, the experience and competence of executives, and the policies of top management in relation to the assigned mission.</td>
<td>1. Promote intelligent cooperation and mutual understanding.</td>
<td>1. Determine extent, types, and methods of controls necessary to keep all actions oriented toward accomplishing the mission.</td>
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<tr>
<td>2. Make reasonable assumptions.</td>
<td>2. Subdivide broad functions into management tasks and group-related functions.</td>
<td>2. Issue timely instructions including when, where, and by whom each task is to be completed and ensure that these instructions are properly understood.</td>
<td>2. Cross-train supervisors and keep them well informed as to overall goals and objectives.</td>
<td>2. Collect, analyze, and evaluate pertinent management information.</td>
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<td>3. Develop an initial detailed plan.</td>
<td>3. Establish organizational relationships; use optimum span of control.</td>
<td>3. Encourage lateral and vertical communication throughout the organization.</td>
<td>3. Establish a norm for measuring results.</td>
<td>3. Establish acceptable variances from this norm.</td>
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<td>4. Determine time and resource requirements to support this plan.</td>
<td>4. Select and assign appropriate personnel and other resources to accomplish the mission.</td>
<td>4. Synchronize as required with external activities involved.</td>
<td>4. Establish administrative instructions to promote coordination.</td>
<td>4. Take corrective action promptly when acceptable variances are exceeded.</td>
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<tr>
<td>5. Check available resources against requirements of initial plan.</td>
<td>5. Allow for change in mission or resources.</td>
<td>5. Use SOP’s and administrative instructions to promote coordination.</td>
<td>5. Make controlling both constant and repetitive.</td>
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<tr>
<td>6. If required, adjust initial plan in area that will least affect the overall mission, to balance requirements against available resources.</td>
<td>6. Assign duties and responsibilities with commensurate authority.</td>
<td>6. Make controlling both constant and repetitive.</td>
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</table>
—Unit Staff responsibility for staff supervision.

*Cdr/Ldr of Cbt/Cbt Spt/Cbt Svc Spt units attached, under OPCON, or in DS of the battalion acts as special staff officers under the appropriate unit staff officer.

Figure 1-2. Battalion Staff.

1-4
—Unit Staff responsibility for staff supervision.
*Cdr/Ldr of Cbt/Cbt Spt/Cbt Svc Spt units attached, under OPCON, or in DS of the battalion acts as special staff officer under the appropriate unit staff officer.
**BG when authorized by DA.

Figure 1-3. Brigade Staff.

1-5
NOTE: For the sake of brevity, the foregoing staff responsibilities have been stated in general terms. Refer to ST 7-150-101-5, "Company Commander and Staff Handbook," for specific and detailed guidance.

Figure 1-4. Type Separate Brigade Staff.

c. The S2 (Intelligence Officer). The S2 has staff responsibility for combat intelligence, counterintelligence, and intelligence training. He collects, evaluates, and interprets information to determine the effects of weather, terrain, and the enemy on the accomplishment of the mission. He ensures that information and intelligence are disseminated expeditiously to the commander, staff, and higher, subordinate, and adjacent units. He recommends counterintelligence measures to the commander and supervises the execution of approved plans. He plans, prepares, and supervises intelligence training programs. He supervises and coordinates surveillance, target acquisition, and reconnaissance activities of organic and attached units. He exercises staff supervision over attached or supporting intelligence units or specialists. He plans for and recommends information gathering patrols, prepares the daily battalion patrol plan, and debriefs all patrols. He is responsible for chemical, biological, and radiological monitoring and survey data, and preparation of fallout prediction plots relating to enemy detonated nuclear weapons. He determines requirements and priorities for maps and furnishes this information to the S4 for procurement and distribution. Ref: ST 7-150-101-5, "Company Commander and Staff Officer Handbook."

d. The S3 (Operations Officer). The S3 has staff responsibility for organization, training, and operations. For a detailed discussion of the Operations Officer, refer to Chapter 2.

e. The S4 (Logistics Officer). The S4 has staff responsibility for planning, coordinating, and supervising operation of logistical facilities. He insures that organic and nonorganic combat service support elements adequately support the tactical plan. The major areas of logistical responsibilities are supply, movements, maintenance, other services, and miscellaneous related activities. The S4 is responsible for the preparation of logistical estimates and appropriate portions of plans and orders; the location, functioning, and local security of unit trains; supervision of all logistical functions; and area damage control. He additionally supervises the disposition of captured enemy supplies.

f. The S5 (Civil-Military Operations Officer). Current series TOEs do not authorize S5's at battalion and brigade level. When an S5 is not provided, the S3 performs this function. However, S5's may be authorized at battalion and brigade level by MTOE or by local command action for units engaged in IDAD operations. Staff responsibility of the S5 corresponds generally to those stated for the G5 in FM 101-5 and FM 41-10.
NOTE. The Command Sergeants Major (CSM). The Command Sergeants Major is a member of the command group and is the commander’s principal advisor and representative in dealing with noncommissioned officers and enlisted men. He performs duties directed by the commander which normally include supervising the functions of enlisted men in the headquarters and assisting the executive officer and adjutant in administrative matters and special reports. The command sergeants major normally accompanies the commander on unit area and field training inspections; conducts periodic NCO calls; visits units in garrison and reinforce the commander’s policies, to help solve problems, and to keep abreast of the personnel and administrative situations; and performs other duties the commander assigns.

Section V. STAFF PROCEDURES

1-7. GENERAL. To prepare itself for a battlefield environment, the staff must develop, understand and use certain staff procedures or "tools." The proper use of these "tools" can contribute significantly to the survivability and efficiency of a command.

a. STAFF COORDINATION. Coordination, one of the basic tools of the staff, is conducted informally with the idea of simplifying staff procedures, reducing paperwork, and saving resources and time whenever possible. Specific procedures are established to facilitate staff coordination and resolve differences between coordinating staff elements.

(1) Means of staff coordination include—

   Formal and informal conferences and briefings, conducted only as required and limited in length, scope, and attendees.

   Properly functioning staff message control.

   Routing of essential information, decisions, and orders between staff sections.

   Close contact and exchange of information between each of the staff sections and with staff sections at subordinate, adjacent, supporting, and higher headquarters.

(2) Coordination is essential for harmonious staff relationships and minimum conflict and duplication.

(3) Staff officers must know what information is readily available from other staff sections as well as what information should be provided to them. They can then determine if discussions with other staff sections are necessary and what specific problems need further coordination. When detailed information is required from other headquarters, the most effective method is the staff liaison visit. These visits, more than any other staff activity, extend the presence of the commander to subordinate, adjacent, and higher units. Staff members, acting as the commander’s representatives, are not only interested in supporting their own functional roles of staff performance and in coordinating the efforts of the command, they also concern themselves with gathering information that will assist in future planning and coordination. The function of a staff liaison visit is to observe, coordinate, and assist—not to meddle. The primary mission is to relate, listen, and see for the commander and other staff members. This means that prior to making a liaison visit a staff officer must have a broad understanding of current plans and be read-in on the latest situation. Further, he must be aware of future plans or anticipated actions.

(4) Frequent visits to subordinate echelons are a necessity, as well as visits to supporting or supported elements and higher headquarters. The morale factor gained by the visited unit is also very important to the commander’s extension of influence.

(5) Another liaison function is performed by the unit liaison officer. He represents the commander at other headquarters, promoting coordination and information exchange. The commander can increase the impact of his liaison officers with higher and adjacent elements by introducing his representatives personally. The liaison element should provide for its own communications and support within practical limitations. Liaison officers with that staff duty should return to their parent headquarters frequently on an exchange basis to keep the command informed.

b. FUNCTIONAL EXPERTISE.

A professional staff officer must continually update and refresh himself in his functional responsibility. He must fully understand and be capable of making good use of all of the procedures and techniques peculiar to his specific area of staff interest, and must continually see more efficient ways of accomplishing these responsibilities.

c. STAFF WRITING.

(1) Staff writing is a means of communicating ideas to the commander, subordinate unit commanders, and other staff officers through orders, recommendations, studies, reports, and other types of formal and informal documents. Effective staff writing conveys the writer's exact meaning and is not subject to misinterpretation. The staff writer must consciously insure that every written product is essential and that it contributes to rapid action and reaction on the part of the organization rather than to bureaucratic files maintenance.

(2) The battle is directed by orders. Battle orders, therefore, must be short, unambiguous, and direct. Formal written orders are rare. Whether oral or written, a good order is clear to those who must carry it out. Clarity and conciseness and far more important than form. The initial order must explain the situation and the intent of the commander so clearly that additional fragmentary orders to meet the changing situation will suffice. Fragmentary orders may be as brief as a few words spoken over the radio, or they may consist of a map overlay or sketch with little explanatory text.

d. ADMINISTRATIVE TOOLS.

Complex operations at command posts procedure an irreducible minimum of files and records that must be maintained for current reference and historical purposes. Recordkeeping is reduced by minimizing informal written reports, eliminating unnecessary and duplicate files and records, removing unnecessary functions from the main command post, increased emphasis on oral reporting, and efficient journalkeeping.
e. REPORTS.

The status of each broad functional area of command interest is maintained through periodic, spot, or summary reports. Commanders and staff officers use reports for the distribution of vital information about the command to higher, lower, and adjacent headquarters. The staff must insure that reporting requirements are kept to an absolute minimum. Only those reports needed to provide essential information and to satisfy higher headquarters should be required of subordinate commands. Continued review of recurring reports eliminates unnecessary items and duplication.

f. MESSAGES.

Hardcopy message traffic includes radio teletype, facsimile, and courier-delivered written messages. Use of electronic means is limited to essential information of immediate operational necessity.

g. VOICE RADIO FM.

Voice radio is the mainstay of division communications. Traffic should be limited to transmission of information of an immediate operational nature, and must be clear and concise. Operational codes, known and understood, will help. Command awareness is instrumental in the success of division FM radio communications.

h. SITUATION MAPS AND INFORMATION DISPLAYS.

(1) Staff sections maintain the minimum number of information displays required to keep members of their sections informed of frequently needed, essential information. The main command post keeps an operational situation map that graphically portrays the friendly and enemy situation. More detailed information is maintained on overlays by each section. Journals are normally used to record significant events.

(2) Information displays are often required to supplement details contained on the situation map or to make available information that is not suitable for posting on the situation map. These displays, usually providing data on the status of units or activities, are simple, and located for easy viewing and posting.

I.8. COMPLETED STAFF ACTIONS.

a. (See Figure 1-5.) A completed staff action is a study of a problem and the presentation of its solution in such a form that all that remains to be done by the commander is to indicate approval or disapproval.

b. The staff officer’s views are placed before the commander in finished form to include an implementing memorandum, directive, or letter.

c. The theory of completed staff action usually makes more work for the staff officer, but it gives the commander more freedom. It also protects the commander from partially developed ideas, voluminous memorandums, and incomplete oral presentations.

d. The results of completed staff action should be clear and furnish concise statements of essential facts.

e. The concept of a completed staff action has a corollary doctrine of equal importance-planning guidance to the staff. Adequate command guidance facilitates completed staff action and precludes wasted effort.

f. A completed staff action concludes with follow up actions by the staff to ensure compliance with instructions or orders.

**Figure 1-5. Completed staff work.**

1-8
1-8. STAFF COORDINATION.
   a. Staff coordination is "staff teamwork" and includes those actions required within the staff to ensure plans and orders are executed in accordance with the commanders desires. Most actions have an overlap of interest that affect more than one staff section; therefore, a close personal working relationship between staff sections is mandatory. Conflicts and duplication are avoided by close and continuous coordination.
   b. Staff actions are examined by all interested staff officers to adjust and resolve conflicts. Brigade and battalion operations generally require rapid coordination and reaction time and must rely heavily upon sound coordination procedures.
   c. It is essential that staff officers know responsibilities of other staff sections to determine each other's requirements and facilitate coordination.
   d. Staff officers must provide a free exchange of information and ideas among themselves to insure coordination.

1-10. PROCEDURES FOR STAFF COORDINATION.
   a. Common methods or procedures are established within a unit to facilitate coordination.
      (1) Internal arrangement of the headquarters is established to receive and route messages, routine, or special action papers to ensure quick delivery and speed reaction time.
      (2) Similar operations are closely located to provide convenient working conditions (S2 S3, S1 - S4).
      (3) Internal communications provide easy, rapid means of contact.
      (4) A system of formal and informal reports is established to provide prompt exchange of information. Direct contact between staff sections is necessary.
   b. Coordination is further ensured by conferences, visits, inspections, and briefings.
      (1) Conferences are used to facilitate coordination between staff sections.
      (2) Staff officers visit units to obtain information for the commander, observe execution of orders, and assist subordinate commanders. Normal courtesy is practiced during visits, e.g., call on the commander initially, state the purpose of the visit, report facts noted, and what the staff officer will report upon return to the headquarters. After the visit, the staff officer reports significant facts to the visited commander and staff.
      (3) The commander and staff officer conduct inspections to determine the readiness condition of the unit. Various methods or techniques may be used to inspect, but in each case the subordinate commander is furnished results of the inspection. These results may then serve as the basis for corrective actions.
      (4) Briefings are a means of keeping the commander and staff informed of the situation and of problems facing the command. Each staff officer must be prepared to brief on the activities of his section, or contribute to a command-type briefing.

1-11. INDIVIDUAL STAFF ACTIONS. Many routine actions are handled within a staff that do not require the formality of the commander and staff planning sequence. Many SOPs normally prescribe required actions and designate primary staff responsibility. Conflict, or overlapping interest that can not be resolved will be solved by the executive office or commander.
   a. The officer designated as 'action officer' for a particular requirement must coordinate with interested staff sections to develop that requirement. The final result of this coordination is then a staff recommendation.
   b. Action officers normally coordinate informally, by telephone calls and conferences with interested persons, or routing of action papers through the headquarters. The value of face to face contact or personal meetings cannot be overemphasized as such relationships provide the action officer with a better knowledge of his subject, provide an excellent exchange of information to others, and generally produce timely and effective results.

1-12. SEQUENCE OF ACTIONS IN MAKING AND EXECUTING DECISIONS.
   a. The commander is responsible for deciding how elements of his command will be employed to accomplish missions. The commander controls the operations of his forces with the issue of timely orders. It is a major function of the staff to assist the commander in arriving at and executing decisions. Routine decisions may be made by the staff within the authority delegated to them by the commander. However, operational decisions are of such fundamental importance that the commander must personally influence the preparation of orders implementing these decisions (Figures 1-6 and 1-7).
   b. The sequence of actions in making and executing decisions involves a series of separate actions or steps known as the sequence of commander and staff actions (Figures 1-6 and 1-7). The sequence describes a logical and systematic procedure to solve major problems and arrive at a properly considered decision. Keep in mind that the sequence is flexible and that steps may overlap, be accomplished concurrently, or even omitted.
      (1) Mission (Step 1). Though estimating and planning are continuous, they are put more into focus upon receipt of a mission. Normally, higher headquarters assigns the mission, but the commander may develop or deduce the mission. The mission or task to be accomplished puts the sequence of commander and staff planning sequence into focus. The commander may initiate his mission analysis at this point. Mission analysis is discussed in (3) below.
      (2) Information available (Step 2). The staff provides the commander with information available based on knowledge of the latest facts and current situation. Subordinate commanders receive information concerning the mission (warning order) and the situation as early as practicable in the planning phase and at least by the time staff estimates are being prepared.
      (3) Mission analysis and planning guidance (Step 3). Based on information available, the commander completes his mission analysis and issues his planning guidance.
CHAPTER 2
OPERATIONS OFFICER S3

2-1. GENERAL.
   a. The operations officer (S3) is the principal staff assistant to the commander in matters pertaining to the organization, training, and operations of the command.
   b. The S3 is a member of the unit staff. He assists the commander not only in planning and coordination but also in the capacity of an operator in the detailed supervision of the accomplishment of unit missions.

2-2. RESPONSIBILITIES.
   a. General. The S3 is directly concerned with the organization of the command and the allocation of personnel, weapons, and equipment. He is the commander's principal advisor in matters dealing with training. He is also the staff officer to whom the commander turns for advice and assistance in conducting tactical operations. In this regard, the operations officer provides information and recommendations on the tactical scheme of maneuver and coordinates the use of available combat support. As the focal point for tactical planning, he prepares and disseminates necessary plans and orders to implement the commander's decision.

   b. Organization.
      (1) Activation and inactivation.
      (a) The S3 is responsible for preparing the overall plan for the activation of a unit. The operations officer analyzes the unit's mission, determines tasks to be accomplished, and recommends to the commander a plan to establish task responsibilities and a schedule for their completion. The plan gives the details of unit organization and establishes priorities for the assignment of personnel (particular attention given to the assignment of cadre) and the allocation of weapons and equipment in short supply and similar pertinent instructions. Throughout the analysis, the determination of tasks, and the preparation of the detailed phases of activation, close coordination with other members of the staff is essential.

      (b) During the execution phase of activation, the operations officer is responsible for receiving and processing units or teams, to include such orientation, training, and reorganization as may be required.

      (c) For a unit's inactivation, he prepares and coordinates a similar plan in reverse.

      (2) Troop list. The operations officer maintains the troop list. He establishes procedures that provide for the continual review of the troop list by interested staff members to include that the numbers and types of units assigned are those that can best accomplish and support the command mission. The troop list is a current list of units organic, attached, under operational control (OPCON), and providing support. There is no prescribed format for a troop list.

      (3) Table(s) of Organization and Equipment (TOE) and Tables of Distribution and Allowances (TDA). The operations officer is responsible for the submission of recommended changes/modifications to TOE's and TDA's for personnel and equipment. This includes responsibility for the management and processing of personnel authorization documents (The Army Authorization Documents System (TADDS), AR 310-49) and subsequent distribution of personnel spaces that may be authorized by higher headquarters. Other staff members submit recommendations based on the impact of the recommended changes/modifications on the overall operations of the command.

      (a) The TOE is designed for combat operations under normal conditions of terrain and other factors found in the operational environment. However, conditions under which a TOE unit will be employed vary extensively according to the physical location of the unit, e.g., there are great differences between requirements for arctic, jungle, desert, and mountain operations. Therefore, the S3 continually studies the requirements of the unit and, where appropriate, recommends changes to the TOE. These requirements may be divided into two broad areas of personnel and equipment.

      (b) Based upon his study of the TOE/TDA and the personnel and equipment requirements needed to accomplish the mission, the operations officer may recommend modification of the organizational structure of the unit through channels in accordance with AR's 310-31 and 310-49. This may eventually result in a modification of the TOE or TDA (MTOE or MTDA).

      (4) Requesting and allocating units. The operations officer requests units and teams for assignment or attachment (except individual and unit replacements, which the personnel officer requisitions) and allocates them according to instructions and priorities that the commander establishes.

      (5) Organization for combat. The operations officer recommends the organization for combat for the conduct of operations and changes thereon, as appropriate, during execution of the operation. The organization for combat includes attachments, supporting roles, and delegation of operational control. Coordination with other staff members is necessary. Often, the staff member consulted provides the organization for combat for a particular element that fails under his supervision.

      (6) Combat elements are characterized by their capability to perform infantry, armor, and cavalry missions.

   c. Combat support elements provide support which increases the combat power of combat units. This support increases effectiveness of combat elements through additional fire support, communications, performance of engineer tasks, and tactical transportation.

   2-1
(d) Combat service support elements perform operations or services which sustain combat and combat support elements conducting tactical operations. These activities are primarily logistical or administrative. Examples of these activities are administration, supply, maintenance, and non-tactical transportation.

e) The schematics in Figure 2-1, 2-2, and 2-3 depict the function of forces in the mechanized infantry division, brigade, and battalion.

Figure 2-1. Mechanized Division Base Showing Function of Forces.

NOTE: Although a combat element of the brigade and division, the elements of the battalion perform the four functions of forces.

c) Training. The S3 has primary staff responsibility for training. All staff officers, however, have a responsibility for making recommendations for training that falls within their areas of interest. The operations officer coordinates with other staff officers and units in carrying out this responsibility. Brigade and battalion S3 training responsibilities include:

1) Training programs and directives.

(a) Based on the commander's decision relative to the factors considered in the training mission and the commander's training estimate, the S3 prepares the unit training program. He disseminates the training program in the form of a training circular or directive which contains guidance for subordinate commanders to develop their training program (See Figure 2-5).

(b) The S3 further prepares necessary orders and directives for the commander based on changing requirements for implementation of the program.

2) Training aids and facilities. Based on his analysis and determination of unit requirements in light of the unit mission and requests from subordinate units, the S3 plans for the procurement and allocation of training aids and facilities and establishes procedures controlling their use within the unit. These procedures may be outlined in the training circular or may be disseminated separately by a directive.
Figure 2-2. Separate Infantry Brigade (Mechanized) Showing Function of Forces.

Figure 2-3. Infantry Battalion (Mechanized) Showing Function of Forces.

2-3
(3) Allocation of training ammunition. These requirements are based on the unit mission, requests from subordinate units, and the commander's desires. They are usually disseminated in an annex to the training circular. Army training Programs and the CTA 23-100 series (CTA 23-100-6 Active Army, CTA 23-100-3 Overseas, CTA 23-100-4 NG/USAR, CTA 23-100-5 USMA/ROTC) are basic guides used in the determination of ammunition requirements for training. Once the requirements and allocations have been established, these are the S3 coordinates with the S4, who has staff responsibility for procurement of ammunition.

(4) Field exercises. The S3 is responsible for the preparation and execution of field exercises at the level necessary to train the unit and its subordinate elements. He accomplishes this by following the procedures outlined in FM 100-5, Maneuver Control.

(5) Unit schools and school quotas. Based upon the state of training, unit requirements, and subordinate unit requests, the S3 requests quotas to branch, service, and technical schools, post or higher unit schools, or NCO academies. He then allocates quotas to subordinate units or to the headquarters sections based on requirements and requests. He also is responsible for local unit schools. This will frequently include scheduled officer and NCO classes on particular subjects for enhancing unit efficiency.

(6) Training evaluation. The S3 has staff responsibility for supervision of training. He, therefore, must plan and conduct training and evaluation. Training progress and effectiveness is measured through periodic administration of individual and unit proficiency and performance tests. These tests are valuable aids in determining the development or progress of units and identifying areas in which increased emphasis is required.

(7) Training records and reports. Training records and reports are no longer required and are not subject to inspection by higher headquarters. However, the S3 should designate those records necessary for identifying unit and individual training status and progress. Elaborate charts are discouraged.

(8) The following are reference publications applicable to training:
(a) FM 21-6, "How to Prepare and Conduct Military Training."
(b) ARTEP 71-2 for "Mechanized Infantry/Tank Task Force."
(c) AR 872-12, "EIB Test."
(d) TC 21-5-7, "Training Management In Battalions."
(e) FM 7-11B/C/CM, "Commander's Manual."
(f) "Infantryman's Job Book."

(g) For specific areas refer to DA Pamphlets 310-1 Index of Administrative Publications (contains listing of all DA regulations, circulars, and pamphlets) and DA Pamphlet 310-3 Index of Doctrinal, Training, and Organizational Publications (contains listing of Field Manuals, Training Circulars, Army Subject Schedules, and Army Training Tests).

Soldiers Manuals.

d. Operations. The S3 is the principal assistant to the commander on combat operations. In this capacity he presents to the commander a coordinated staff recommendation based on the operation estimate and the estimates of the remaining staff officers. The duties of the S3 vary with the situation and commander. The S3 has primary staff responsibility for the following general areas of combat operations:

(1) The operation estimate.
(2) Preparation of operational records, reports, and SOP's.
(3) Supervision and coordination of TOC activities.
(4) Recommendation of priorities for the allocation of personnel and logistics as they effect operational readiness.
(5) Preparation of overlays on orders/plans and integration of appropriate annexes/appendixes into orders/plans.
(6) Recommendations during conduct of operations concerning:
(a) Task organization.
(b) Scheme of maneuver and fire support integration.
(c) Employment of combat, combat support, and combat service support units.
(d) Allocation and assignment of special ammunition.
(e) Prescribed loads to include ammunition.
(f) Required supply rate (RSR).
(g) Coordination of airspace (brigade).
(h) Nuclear vulnerability assessment.
(i) Implementation and coordination of electronic warfare support.
(j) Supervision of troop movements and publication of movement orders.
(k) Designation of areas for occupation, quartering parties, or staging of units.

Planning. Continuous planning is a major function of the S3. The highest degree of coordination is required in preparation of future and contingency plans. Time and availability of personnel determine the extent and detail of planning. Brigades and battalions are normally involved with immediate operations and the contingency plans to support them.

2-3. ORGANIZATION OF OPERATIONS SECTIONS. TOE authorizations for operations sections are shown below. Personnel below the dashed line are assigned to sections by the executive officer. Operations sections are organized for control of combat operations as discussed in paragraph 2-4.
APPENDIX M

Functions of the Staff

THE PURPOSE OF THE STAFF IS TO RELIEVE the commander of as much of the burden of routine matters as possible. When preparing for operations, it is up to the staff to gather the information which will help the commander make his decisions. Based on the information available to him from the staff and on his own judgment and experience, THE COMMANDER DECIDES. It is then up to the staff to see that the commander's decision is carried out and that necessary support required for an operation is provided to the battalion task force.

The battalion task force operates with a single staff. It consists of the S1, Personnel; S2, Intelligence; S3, Operations; and S4, Logistics. The Modified Table of Organization and Equipment (MTOE) under which a battalion is organized may also designate some battalion officers as special staff officers; for example, the battalion communications platoon leader, the battalion medical platoon leader, and the battalion motor officer.

No two commanders operate alike. The task force commander will use his staff according to his needs, based on the individual capabilities of each officer. It is important, therefore, that the battalion task force commander inform his staff of how he intends to operate. As soon as possible after assumption of command, he should prescribe staff relationships to himself and to subordinate units, and, most important, to those whom he will look for coordination of staff activities.

Staff officers should remember that their jobs are not only to assist the battalion task force commander, but to assist company team commanders as well, for the company team commander has no staff.

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERVIEW</td>
<td>M-1</td>
</tr>
<tr>
<td>BATTALION TASK FORCE STAFF OPERATIONS</td>
<td>M-2</td>
</tr>
<tr>
<td>STAFF RELATIONSHIPS</td>
<td>M-3</td>
</tr>
</tbody>
</table>

M-1
BATTALION TASK FORCE
STAFF OPERATIONS

To be successful, the staff must work together. No staff officer can work in isolation and expect to do his job. Each staff officer must actively pursue every scrap of information that will help the commander to see the battlefield and use his combat power. Staff officers continually exchange information with superior headquarters staff officers, subordinate unit leaders, and among themselves. The S2, for example, keeps the entire staff informed about the enemy and terrain over which the battalion task force expects to fight. The S4 informs the S3 when a proposed course of action cannot be logistically supported. Likewise, the S1 must tell the S3 when critical personnel shortages occur so the S3 can recommend priority for assignment of replacements. The S3 keeps the staff informed of the tactical situation so each staff officer can determine what he needs to do to make the operation a success.

The staff works to see the battle as it unfolds, to anticipate requirements for support of the battalion task force, and to get the support necessary to win the battle.

The command sergeant major primarily advises the commander on matters concerning the enlisted ranks. The command sergeant major should not be relegated to the status of an administrator. He is frequently the MOST EXPERIENCED SOLDIER in the task force. A good command sergeant major has his finger on the pulse of the command. He is often the one who first discovers that the commander’s decisions and policies are not being carried out in the manner the commander intended. It is also the command sergeant major who first discovers which of the commander’s policies are successful and should be continued. The task force commander should establish a close relationship with his command sergeant major. Whenever possible, he should
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<thead>
<tr>
<th>TASK</th>
<th>S1</th>
<th>S4</th>
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<tr>
<td>3. Development and Maintenance of Morale.</td>
<td>Exercises staff responsibility for postal, financial, religious, exchange welfare, and legal services; rest and leave.</td>
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<td>Procures decorations as required.</td>
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<tr>
<td>a. Decorations and Awards.</td>
<td>Recommends policies for decorations and awards; insures that recommendations for awards are made promptly.</td>
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<td>Coordinates transportation.</td>
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<tr>
<td>b. Graves Registration.</td>
<td>Exercises staff responsibility for planning and supervising graves registration activities.</td>
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<td>4. Health Services.</td>
<td>Develops estimate of injury, sick, and wounded rate for future operations. Recommends policy for evacuation and hospitalization of casualties due to fallout contamination, and chemical or biological warfare.</td>
<td>Provides additional transportation as required.</td>
<td>Provides S1 with enemy situation and capabilities, characteristics of the area of operations which may affect evacuation or hospitalization plans.</td>
<td>Provides plan of operations and present dispositions for planning for evacuation and hospitalization. Requests attachment of medical units and/or facilities when approved by the commander. Requests Army aviation for evacuation requirements.</td>
</tr>
<tr>
<td>5. Maintenance of Discipline, Law, and Order.</td>
<td>Exercises staff responsibility for matters of discipline, law, and order; arranges for courts martial within commander's jurisdiction and desires.</td>
<td>Furnishes statistics on trends of loss or damage to equipment due to carelessness.</td>
<td>Monitors matters of discipline, law, and order for impact on security clearances.</td>
<td>Includes corrective measures in training programs as directed.</td>
</tr>
<tr>
<td>6. Headquarters Management.</td>
<td>Coordinates logistic support, including shelter, repair, construction, and maintenance for the headquarters.</td>
<td>Assists S1 and HQ company commander in planning for counterintelligence measures for movement, location, and operation of the headquarters.</td>
<td>Coordinates the general location, time, and conditions of movement of the HQ, and overall defense of the HQ area with HQ company commander.</td>
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<td>7. Message Center Operations.</td>
<td></td>
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<td>Coordinates the internal distribution of incoming messages and use of motor messengers with the C-EO.</td>
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<tr>
<td>1. Collection of Information.</td>
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<tr>
<td>a. Ground Reconnaissance.</td>
<td>Develops plans for, and coordinates ground reconnaissance.</td>
<td>Designates combat units for reconnaissance, plans reconnaissance in force, coordinates ground reconnaissance with combat patrols and with other combat operations including fires. S3 (air) coordinates air support in area of reconnaissance.</td>
<td>Provides logistic support for reconnaissance activities.</td>
<td></td>
</tr>
<tr>
<td>b. Air Reconnaissance (Army Avn.).</td>
<td>Originates requests and consolidates and screens requests from other staff elements, agencies, or units.</td>
<td>Coordinates with other operational air missions.</td>
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<tr>
<td>c. Air Reconnaissance (Supporting Services).</td>
<td>Originates requests for air reconnaissance; consolidates and screens requests from other staff elements, agencies, and units; disseminates results of reconnaissance.</td>
<td>Coordinates with other air missions. Recommends basic and front-line coverage.</td>
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<tr>
<td>d. Surveillance.</td>
<td>Plans for systematic watch of the battle area. Assigns missions in coordination with S3. Coordinates all surveillance activities. Coordinates EW aspects of radars with C:EO.</td>
<td>Furnishes information on location of own forces and operation plans.</td>
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<tr>
<td>e. Target Acquisition.</td>
<td>Plans target acquisition in coordination with S3. Assigns collection missions and coordinates collection of target information. Identifies potential targets and disseminates this information to the S3 and teams.</td>
<td>Evaluates potential targets developed by S2; makes general target analysis.</td>
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M-5
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<th>TASK</th>
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<tr>
<td>f. Prediction of Enemy Nuclear Weapon Fallout.</td>
<td>With brigade guidance, estimates effects of the predicted fallout on the area of operations and enemy capabilities; disseminates to staff. Receives information from subordinate, adjacent, and superior units on the Ground Zero (GZ), height of burst, and yield of enemy-delivered nuclear weapons and disseminates to staff and affected units.</td>
<td>Evaluates vulnerability of units to the predicted fallout. Prepares recommendation for revised task organization and alternate tactical course of action, if required.</td>
<td>Uses fallout as a factor in estimating casualties and replacement requirement.</td>
<td>Estimates effect the predicted fallout will have on logistic support and initiates planning to minimize effects. Estimates vulnerability of train areas to predicted fallout and initiates tentative planning as appropriate.</td>
</tr>
<tr>
<td>g. Technical Intelligence.</td>
<td>Coordinates activities of technical intelligence detachments when attached. Uses technical intelligence in estimates and studies. Disseminates technical intelligence to appropriate parties.</td>
<td>Receives and requests technical intelligence that may affect operations. Assigns elements to secure the detachments.</td>
<td>Assists in evacuation of technical intelligence material.</td>
<td></td>
</tr>
<tr>
<td>h. Weather Information.</td>
<td>Requests weather information from Brigade S2, disseminates.</td>
<td>Analyzes weather information for effect on operations and training.</td>
<td>Analyzes weather information for effect on health of personnel.</td>
<td>Analyzes weather information for effect on logistics activities.</td>
</tr>
<tr>
<td>2. Production of Intelligence.</td>
<td>Disseminates information on area of operations and analyzes the area as required.</td>
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<tr>
<td>a. Analyses of Area of Operations.</td>
<td>Prepares and disseminates intelligence estimates as required.</td>
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<tr>
<td>c. Planning for and Distribution of Maps and Map Substitutes.</td>
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<tr>
<td>3. Development of Essential Elements of Information (EEI).</td>
<td>Recommends EEI to the commander based on determination of information and intelligence requirements and recommendations of other staff officers. Disseminates approved EEI as specific questions to subordinate units. All staff officers recommend to S2 EEI on enemy capabilities and characteristics of area of operations having major effect on particular area of interest.</td>
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<tr>
<td>4. Counterintelligence.</td>
<td>Plans and supervises implementation of counterintelligence measures to support all operations.</td>
<td>Determines effect on operations. Designates forces, area, equipment, and operations requiring priority measures.</td>
<td></td>
<td>Designates logistics activities requiring priority measures.</td>
</tr>
<tr>
<td>5. Training of Unit in Intelligence.</td>
<td>Supervises intelligence training of all subordinate units. Prepares intelligence training programs. Establishes requirements for intelligence training material. Coordinates EW aspects of training with C-EO.</td>
<td>Allocates time and facilities in unit training programs. Integrates with other training.</td>
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</tbody>
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Section III.
Operations.

<table>
<thead>
<tr>
<th>TASK</th>
<th>S3</th>
<th>S2</th>
<th>S1</th>
<th>S4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Operations, General.</td>
<td>Advises the commander on combat and combat support matters, and on organization and training.</td>
<td>Provides commander and staff with the current intelligence situation. Exercises staff supervision over intelligence and counterintelligence activities.</td>
<td>S1/S4 advise commander and/or S3 on ability to support operations.</td>
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<td>2. Training</td>
<td>Prepares and supervises execution of training programs, directives, and orders; supervises the planning and conduct of field exercises. Determines requirements for, procures and distributes, or assigns training aids and facilities. Plans, conducts, and coordinates training inspections and tests.</td>
<td>S1, S2, S4, &amp; C-EO, in conjunction with S3, are responsible for supervision of training of the command in respective areas of interest. Provide S3 with recommendations concerning training. Submit requirements for training aids and areas to S3.</td>
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<tr>
<td>3. Operations.</td>
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<tr>
<td>a. Operation Estimate</td>
<td>Based on the commander's planning guidance and information received from other staff officers, prepares operation estimate which culminates in a recommended course of action.</td>
<td>Provides S3 with intelligence estimate and analysis of area of operations.</td>
<td>Informs S3 of capability to support mission, personnel limitations, and may recommend course of action from personnel viewpoint.</td>
<td>Informs S3 of logistics limitations and of capability to support mission, and may recommend course of action from a logistics viewpoint.</td>
</tr>
<tr>
<td>b. Tactical Plans.</td>
<td>Conducts tactical planning to include supervision and coordination of supporting plans. Prepares alternate operation plans as required. Recommends allocation and priorities for personnel, supplies, and equipment, including ASR for combat and combat support units. Establishes prescribed load for combat and combat support units.</td>
<td>Based on commander's guidance, develops EEI. Provides S3 with continuing intelligence and makes recommendations concerning the plan as affected by the changing intelligence.</td>
<td>With S4, advises S3 of limitations in combat service support which may affect the tactical plan; develops plans to provide required combat service support; recommends to S3 allocations and priorities for combat units.</td>
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M-8
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<thead>
<tr>
<th>TASK</th>
<th>S3</th>
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<th>S4</th>
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</thead>
<tbody>
<tr>
<td>(2) Fire Support.</td>
<td>Supervises fire support planning.</td>
<td>Develops list of potential targets for attack by fire support means. Directs collection effort to detect indications of potential targets and to develop detailed target information.</td>
<td>Provides S3 with ammunition supply and location data and logistic delivery capability for consideration in determining employment of fire support. Insures approved fire support plan can be supported, relocates ammunition stocks as needed, or notifies S3 of inability to support the plan and makes appropriate recommendations.</td>
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</tr>
<tr>
<td>c. Tactical Troop Movements</td>
<td>In coordination with S4, plans and supervises tactical troop movement.</td>
<td>Advises S3 concerning counterintelligence aspects. Provides information on weather, terrain, and enemy situation.</td>
<td></td>
<td>Receives transportation requirements from S3 and determines allocation of transportation. Determines priority for movement of combat service support units. Exercises supervision over traffic regulation and traffic control.</td>
</tr>
<tr>
<td>d. Miscellaneous Activities</td>
<td>Establishes priorities for communications to support tactical operations. Reviews the signal operation plans for communications support of tactical operations. The C-E0 develops plan for establishing signal communications.</td>
<td>Coordinates enemy EW threat with C-E0 and S3.</td>
<td></td>
<td>S1/S4 submit requirements to S3 for signal communications.</td>
</tr>
<tr>
<td>(2) General Location of Tactical Operations Center (TOC)</td>
<td>In coordination with the C-E0 and HQ company commander, selects the general location of the TOC.</td>
<td>Advises on intelligence aspects.</td>
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**M-9**
### Task 3: Execution

<table>
<thead>
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<th>TASK</th>
<th>S3</th>
<th>S4</th>
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<tr>
<td>e. Execution.</td>
<td>Supervises, coordinates, and integrates combat and combat support operations, making adjustments as required, within authority delegated to him by the commander.</td>
<td>Advises, supervises and supports within respective areas of interest.</td>
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### Section IV: Logistics

#### Table

<table>
<thead>
<tr>
<th>TASK</th>
<th>S4</th>
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<tr>
<td>1. Supply.</td>
<td>Determines supply requirements.</td>
<td>Recommends allocation and priorities for equipment and supplies having an impact on training or tactical mission.</td>
<td>Provides S4 with information of enemy capabilities for interfering with logistic support and characteristics of area of operations which may affect logistic support.</td>
<td>Provides unit strengths and loss estimates to S4 as a basis for logistic support forecast.</td>
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<td>Procures supplies by requisition on the supply base of support.</td>
<td>Recommends prescribed loads for equipment and supplies pertaining to training tactical mission.</td>
<td>Provides requirements for prisoners and estimated capture rates.</td>
<td>Provides S4 with estimated number of replacements for determination of equipment and supply.</td>
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<td>Insures proper receipt, storage, and distribution of supplies.</td>
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<td></td>
<td>Determines method of distribution; insures distribution schedules are effective, insures availability of transportation for distribution; and selects supply routes.</td>
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<tr>
<td>2. Transportation.</td>
<td>Determines transportation requirements.</td>
<td>Provides S4 with requirements for transportation for training or tactical purposes.</td>
<td>Provides information on the area of operations as it affects the use of transportation.</td>
<td>Provides S4 with requirements on transport of replacements and PWs.</td>
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<td>Coordinates required transportation from assigned and attached transportation assets or from those received from superior headquarters.</td>
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<td>Consults with S3 to determine allocations and priorities.</td>
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<td></td>
<td>Provides information and instructions to Spt Plt Ldr regarding transportation.</td>
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<th>TASK</th>
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<td></td>
<td>prepares transportation plans to meet vehicular requirements. Responsible for administrative movements, to include selection of routes (in coordination with S3), highway regulation, and traffic control.</td>
<td>Coordinates use of routes with S4. May recommend routes be restricted for tactical use only.</td>
<td>Keeps S4 informed of enemy capabilities that may interrupt routes.</td>
<td>Coordinates with S3 for use of military police for traffic control and discipline, law and order enforcement.</td>
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a. Priorities for Employment.

|      | Preparres general plan for service support to include: selection and allocation of combat service support assets (in coordination with the operations officer), plans for recovery and evacuation of vehicles and equipment; collection and disposition of excess property. Recommends evacuation and repair policies. Recommends amount and type of maintenance training. Provides commander and staff with evaluation of maintenance conditions, an estimate of impact on planned operations, and recommendations for correction or improvement of conditions. | Provides S4 with requirements for combat service support. May recommend priority of maintenance effort. | Submits to the S4 requirements for combat service support. |

b. Movement and General Location for Combat Service Support Activities.

|      | Selects general location of support area; designates time of movement of service units; coordinates with supporting activities. | Provides S4 with enemy situation and capabilities affecting location of logistic activities and time of movement. | Coordinates with S4 on general location and time of movement as concerns administrative activities. |

M-11
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<th>TASK</th>
<th>S4</th>
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<tr>
<td>c. Maintenance</td>
<td>Supervises maintenance program.</td>
<td>Coordinates with S4 for inclusion of maintenance training and supply economy in training program.</td>
<td>Coordinates with S4 for inclusion of maintenance training and supply economy in training program.</td>
<td>Coordinates with S4 for inclusion of maintenance training and supply economy in training program.</td>
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<td>Coordinates backup support for maintenance beyond the capability of assigned or attached maintenance assets.</td>
<td>CEO coordinates COMSEC evacuation, CE org maint, and external support requirements.</td>
<td>CEO coordinates COMSEC evacuation, CE org maint, and external support requirements.</td>
<td>CEO coordinates COMSEC evacuation, CE org maint, and external support requirements.</td>
</tr>
<tr>
<td>d. Utilities for Facilities</td>
<td>Coordinates activities pertaining to maintenance and repair of utilities for facilities.</td>
<td>May recommend use, allocation, and priority of issue of excess property.</td>
<td>May recommend use, allocation, and priority of issue of excess property.</td>
<td>May recommend use, allocation, and priority of issue of excess property.</td>
</tr>
<tr>
<td>e. Collection and Disposition of Excess Property Salvage and Captured Materiel</td>
<td>Provides subordinate units with guidance for disposition of excess property salvage and captured materiel.</td>
<td>Collection and disposition of captured enemy materiel are the primary staff responsibilities of the S4, but coordination with S2 and technical intelligence personnel is required.</td>
<td>Collection and disposition of captured enemy materiel are the primary staff responsibilities of the S4, but coordination with S2 and technical intelligence personnel is required.</td>
<td>Collection and disposition of captured enemy materiel are the primary staff responsibilities of the S4, but coordination with S2 and technical intelligence personnel is required.</td>
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<td>Allocates usable supplies and equipment (coordinates with S3).</td>
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M-12
Lesson 2

ORGANIZE A BATTALION TACTICAL OPERATIONS CENTER (TOC)

The task taught in this lesson is performed by a battalion S3. It consists of:

- Identifying the internal organization, functions, survivability measures, and efficiency techniques for the TOC
- Locating the site of the TOC and arranging duty shifts.

**Task:** Organize a battalion tactical operations center.

**Condition:** Given extracts of doctrinal literature pertaining to the organization of a battalion tactical operations center and a series of multiple-choice questions relating to tactical reasoning or tactical situation.

**Standard:** Correctly answer multiple-choice questions dealing with the organization of the tactical operations center.

**EXERCISE 1: IDENTIFYING THE INTERNAL ORGANIZATION, FUNCTIONS, SURVIVABILITY MEASURES AND EFFICIENCY TECHNIQUES FOR THE TOC**

The Tactical Operations Center is a command installation in which the communication facilities and personnel are centralized to control and coordinate current tactical operations. A TOC is established at all levels of command.

The TOC normally expedites staff reaction by providing the appropriate personnel with the means to gather, process, receive, analyze, and display data rapidly in a readily usable form; by placing coordinating elements in close proximity, and by providing responsive communications between such elements and the higher, adjacent, and subordinate commands.

The purpose of the TOC is to provide the commander with current evaluated information and recommendations concerning combat operations and the use of available resources. The tactical operations center assists in the following manner.

Direction, control, and coordination of current combat and combat support operations of organic, assigned, and attached forces.

Integration of combat support provided by other Army elements or other services into the commander's concepts of operation.

Coordination of combat operations with the operations of other Army elements or other services to the extent required or permitted by higher authority.

It is important to note that the tactical operations center is neither a formal military organization nor a separate agency or echelon of command. Personnel who make up the TOC, and the equipment required to operate the facility come from within allocated resources of the unit, and the TOC operates solely as an operating element.
to accomplish timely staff actions on matters concerning current operations. Principles governing TOC operation and organization are dependent upon the situation and the commander's desires. On-call representatives from staff sections and liaison personnel from units are used for special or nonrecurring requirements. Activities within the TOC center around the various staff sections who continuously maintain a flow of information to the corresponding elements of higher, adjacent, and lower units, or at higher levels to an alternate TOC, depending on the standing operating procedures for emergency operations followed by the command. Staff elements within the TOC maintain staff journals of the combat situation, decisions reached, and actions taken; and these elements regularly advise their respective counterparts outside the TOC.

**Primary Functions of Staff Elements within the TOC**

The S3 element's primary functions within the TOC are supervision and coordination of tactical operations. The S3 presents to the commander the current operation estimate of the situation and recommendations for the employment of organic, assigned, attached, and supporting combat and combat support units. The S3 element insures information is disseminated to other elements of the TOC.

**The S3 element:** The duties of the S3 element are:

- Maintaining information on status of units reporting directly to the headquarters
- Maintaining information on the current status of barriers and obstacles
- Maintaining information on the current friendly situation
- Maintaining a continuous estimate of the situation
- Recommending the employment of organic, attached, or supporting combat and combat support resources
- Disseminating the commander's decisions, guidance, priorities, and allocation of resources
- Preparing the maneuver portion of fragmentary operation orders
- Determining, recommending, integrating, and coordinating requirements for combat and combat support from other Army elements and other services
- Disseminating orders and information and monitoring execution to insure compliance with the commander's concept and decisions
- Supervising and coordinating activity with the TOC
- Disseminating nuclear strike warnings
- Recommending actions required as a result of enemy employment of nuclear, biological, and chemical weapons in the command area
- Coordinating requirements for movement of combat and combat support units.

**The S2.** The duties of the S2 are:

- Coordinating all intelligence activities pertaining to the current situation
- Preparing portions of the current intelligence estimate and disseminating intelligence through the use of spot reports
- Maintaining the enemy portion of the situation map.

The primary function of the fire support element is to provide command coordina-
tion of fire support on surface targets to support the plan of operation. This function is accomplished under the supervision of the FSCOORD. The primary functions of the tactical air control party are supervision and coordination of tactical air support operations. The tactical air control party includes the air liaison officer who normally co-locates with the FSCOORD.

**TOC Internal Organization**

The major considerations for TOC internal organization are:

- S2/S3 work areas are co-located
- TOC communication equipment located and manned
- Fire Support Coordinator (FSCOORD) /tactical air control party are co-located.

Specific work areas are arranged to provide a functional area in which they can produce the best results. The S3 should have an area that contains a work table, planning maps, and access to communications and files which he may need for reference. The operations sergeant needs a work space where he may conduct those administrative and supervisory activities which assist in making the TOC effective. An area for reproduction equipment must also be provided. His work area must be within the TOC so that he may supervise the activities within the TOC.

The operations sergeant is the senior enlisted assistant to the S3. He will assist with the planning, preparation, and distribution of orders to include operations orders, fragmentary and warning orders. He will supervise the daily activities of the other members of his section that he is in charge of within the TOC operation. Numerous records, files, reports, and other administrative details will be handled by this individual. Certain primary areas of responsibility are: organization of the TOC, maintenance of the Staff Journal, and posting of current situation maps and overlays.

The radio operator must have sufficient journal forms on which to record incoming messages and a current CEOI so that proper radio procedures are used on the net. The TOC will normally serve as the net control station.

Up-to-date operation maps should be located in the TOC depicting the current locations and situations of each unit under the TOC control. The S2 section should be located jointly with the operations section. Within their area the S2 should be provided a work space where he may plan, evaluate intelligence information, and conduct his daily activities. The intelligence NCO's work space should provide an area to conduct routine administrative duties, store classified materials, and files of intelligence and counterintelligence material available for ready reference. A clerk is also assigned to assist in daily activities.

Close to the operations map should be located an intelligence map which shows the latest intelligence picture available to the unit. This map and other materials will be used by the commander, S3, and S2 to plan for the conduct of future operation and provide them with an up-to-date picture of the current tactical situation.

Located within the TOC is the fire support element. Here the fire support coordinator and his assistants clear all fires on ground targets within the battalion's sec-
tor or zone of action. Communications equipment, up-to-date situation maps, and planning maps for fire support are located in their area. The fire support coordinator is the commander's principal adviser on the use of supporting artillery fires.

A tactical air control party is provided to each maneuver battalion by the Air Force. This party consists of an air liaison officer, a forward air controller, and enlisted assistants. These individuals have the communications equipment available to request and control close air support and tactical air reconnaissance sorties.

They are the commander's principal advisers on the capabilities of Air Force tactical aircraft ordnance, and reconnaissance capabilities.

These sections form the tactical operations center, its capabilities, and conduct its operations.

The mechanized infantry battalion have the added mobility which is provided by the M577 command post carrier. With these vehicles the battalion has the capability of a mobile command post and tactical operations center.

Once in location the TOC is constructed by extending the canvas of the S3 and S2 tracks and connecting them to form a large TOC. The fire support element also has an M577 which provides additional space and the tactical air control party has an M113 to provide them with the same mobility as the unit it supports.

The S3 section has on the track an area large enough to provide the radio operator and clerk sufficient work space to perform their assigned duties. The other area is sufficient for the operations sergeant and S3 to conduct their activities. Current situation maps and briefing maps will be maintained in this area.

The S2 section likewise has a secure storage area for classified documents and sufficient work space for the clerk inside the M577. The S2 and the intelligence sergeant will work in the canvas area and have portable intelligence maps and charts to provide the commander with the information he needs to plan and conduct operations. The fire support coordinator is in his own M577 carrier which provides his section with sufficient work space to accomplish their assigned missions.

The tactical air control party will be jointly located in the TOC area with their M113. This M113 has been provided with special radio mounting brackets to allow the installation of the Air Force radios necessary to control and request close air support and tactical air reconnaissance missions.

The capability of mobility in the mechanized infantry to displace to a new location is accomplished by dispatching one of the section tracks as a jump CP. Constant operations and communications are maintained during the displacement. Upon receipt of the order to displace to the new location at the rear, TOC transfers control to the new TOC and dismantles to rejoin the unit.
TOC OPERATION CHECKLIST

Section I: Mission requirements

1. All radios (AM/FM) operational and manned by qualified personnel. ____  ____
2. Situation map posted with the current operation(s) and updated with significant developments. ____  ____
3. The Staff Duty Journal (DA Form 1594) is opened as TOC is operational and all significant developments are entered on the form. ____  ____

Section II: Additional requirements that improve efficiency and survivability

4. Telephone nets are opened. ____  ____
5. Planning map and/or planning overlays are available to the commander. ____  ____
6. TOC personnel are assigned defensive sectors and hasty defensive positions are prepared. ____  ____
7. Access to TOC is controlled (e.g., concertina and sentries positioned and I.D. badges used). ____  ____
8. TOC duty shifts are designated. ____  ____
9. Vehicular equipment and positions are camouflaged. ____  ____
10. Facilities are blacked out. ____  ____
11. Generators are sandbagged. ____  ____
12. Fighting positions are improved. ____  ____

Section 2-4 on pages 2-8 through 2-13 ST 7-150 FY 79 describes further the organization for control of combat operations. An extract of these pages is located at the end of this lesson on pages 51 through 56 of this subcourse. Read it now before proceeding with Practical Exercise 1.

PRACTICAL EXERCISE 1

You have completed the instructional material for Exercise 1 and should now be able to identify the doctrinal considerations that apply to the organization of a battalion tactical operations center. Check your ability to identify the doctrine by answering the following questions. Answer as many questions as possible without looking back at any of the instructional material. The solutions will be found at the end of this ex-
1. The objective of internal organization for the TOC is to provide ____________________________ staff action.

2. The staff sections at the battalion/brigade level that constitute the nucleus of the TOC are the:
   a. S1 and S2.
   b. S1 and S3.
   c. S2 and S3.
   d. S3 and S4.

3. List the three major considerations for TOC internal organization.
   __________________________________________
   __________________________________________
   __________________________________________

4. At what levels of command is a TOC established? __________________________________________

5. What is the purpose of the TOC? ________________________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

6. Principles governing TOC operation and organization depend upon the:
   a. FCOORD's decision.
   b. S2's decision.
   c. S3's recommendations.
   d. Situation and commander's concept.

7. Within the TOC, the primary function of the S3 is the:____________________________________
   __________________________________________
   __________________________________________

8. What does the S3 present to the commander? ____________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

9. Within the TOC, the primary function of the S2 is the:____________________________________
   __________________________________________
10. What does the S2 prepare? Maintain? __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. The fire support element functions under the supervision of the____________________
_______________________________________________________________________

12. What is the primary function of the fire support element? __________________________
________________________________________________________________________
________________________________________________________________________

13. What is the primary function of the tactical air control party within the TOC? _________
________________________________________________________________________
________________________________________________________________________

14. As the S3 you have asked the operations sergeant to make available preprinted forms for
operation orders since this will save time in reproducing the original and contribute to the overall
________________________________________________________________________
________________________________________________________________________

15. As the S3 you direct radio frequencies and call signals to be changed often and to use
directional antennas. Both of these measures are __________________________________
________________________________________________________________________

16. Within the TOC the S3 element maintains information on: _________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

17. True or False: The TOC is a formal military organization. _________________________

18. What are the operations sergeant's primary areas of responsibility?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

19. What should be located close to the operations map? ___________________________

20. What does the M577 provide to the infantry battalion? ___________________________
SOLUTIONS FOR PRACTICAL EXERCISE 1

1. Quick; responsive; coordinated.
2. c.
3. S2/S3 work areas are colocated. TOC communication equipment located and manned. FSCOORD/tactical air control party are colocated.
4. All levels of command.
5. To provide the commander with evaluated information and recommendations concerning current combat operations and the uses of resources.
6. d.
7. Supervision and coordination of tactical operations.
8. The current operation estimate of the situation and recommendations for the employment of all combat and support units.
9. Coordination of all intelligence activities pertaining to the current situation.
10. The S2 prepares portions of the current intelligence estimate and disseminates intelligence through the use of spot reports. The S2 maintains the enemy portion of the situation map.
11. FSCOORD (fire support coordinator).
12. To provide command coordination of fire support on surface targets to support the plan of operation.
13. Supervision and coordination of tactical air support operations.
14. Efficiency of the TOC.
15. Critical to the survivability of the TOC.
16. The status of units reporting directly to the headquarters. The current status of barriers and obstacles. The current friendly information.
17. False.
18. Organization of the TOC; maintenance of the Staff Journal; and posting of current situation maps and overlays.
19. The intelligence map.
20. Added mobility.
EXERCISE 2: LOCATING THE SITE OF THE TOC AND ARRANGING DUTY SHIFTS

Main TOC

The main TOC is located in the main command post of the headquarters and shares the physical security and communication services established for the command post. Administrative traffic in the command post is routed to cause the least possible interference with TOC operations. The coordination and supervision of battalion operations are exercised primarily through the main TOC.

During displacement or movement of the TOC due to changes in the situation, the main TOC must continue to operate in its old location until communications are established and functioning at the new location. The new location may serve as a temporary or jump TOC and may be staffed by elements assigned to function as the alternate TOC or by the off-duty shift of the main TOC.

Temporary or Jump TOC

Changes in the tactical situation may dictate that a temporary or jump TOC be located forward or to the rear of the main TOC.

There is no fixed organization for the jump TOC; rather, it consists of personnel and equipment that the battalion commander feels are necessary to perform the mission.

Locating the Site of the TOC

Prior to selection of a TOC site there are certain considerations for site selection that must be weighed in detail. Based on the enemy or friendly situation, the proposed new location for the TOC may vary in exact location. In the attack, the TOC should be placed well forward to prevent premature displacement forward due to the advancing units. In the defense, the TOC should be well to the rear to prevent premature displacement due to the enemy pressure. Routes of communication must be studied carefully to provide the battalion with the best possible plan for traffic to and from the TOC. Communications requirements must be closely studied to insure adequate communications with higher, subordinate, and adjacent units. The tactical situation may force the TOC to be located in areas it might otherwise avoid. Space requirements dictate that the site chosen must provide for adequate dispersion within the installation. Trafficability is a factor in selecting a site to withstand movement of wheeled and tracked vehicles. Finally, cover, concealment, and security become determining factors in site selection.

The location of TOC is as follows:

1. General location - S3 determined
2. Specific locations - S1/headquarters commandant selected.
In locating the site of the TOC, you must consider the following:

- Cover and concealment: Will the physical layout and camouflage preclude visual detection?
- Trafficability: Is the area trafficable in all weather?
- Accessibility: Is the area accessible to friendly forces?
- Line of sight: Can the TOC communicate with required units on FM radio?
- Terrain: Is the area physically defensible?

**Arranging Duty Shifts**

The specific arrangement of duty shift at battalion and brigade level is often a matter of command policy. In determining the arrangement of TOC duty shifts, the S3 should consider the:

- Current, around the clock, duty shift arrangements
- Period of time the TOC is to be operational
- Integration of operations and intelligence personnel on every shift
- Anticipated frequency of TOC movement
- Experience of the available personnel
- Periods of activity to vary the size of shifts
- Efficiency of the TOC in case the principal staff officer accompanies the commander away from the TOC.

**PRACTICAL EXERCISE 2**

You have now completed the instructional material for Exercise 2. Check your ability to locate the site of the TOC and arrange duty shifts by answering the following questions. Answer as many questions as possible without looking back at the instructional material. The solutions will be found at the end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. Memorize and list five considerations for locating the site of the TOC.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. List from memory at least five considerations for determining the arrangement of TOC duty shifts.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   You are the S3 of an infantry battalion. In determining the specific site for your
TOC, one possible location would be in a deep valley that is heavily wooded. Use this situation to answer questions 3 through 5.

3. An advantage of placing the TOC in this location might be:
   a. Cover and concealment.
   b. Weather.
   c. Line of sight.
   d. Time.

4. A disadvantage of placing the TOC in this location might be:
   a. Cover and concealment.
   b. Weather.
   c. Line of sight.
   d. Time.

5. Another disadvantage of placing the TOC in this location might be:
   a. Time.
   b. Trafficability.
   c. Credibility.
   d. Weather.

6. As the S3 of an infantry battalion, you have been organizing the TOC into two duty shifts. You are considering assigning three duty shifts because recent changes in the tactical situation demand:
   a. Varying the size of personnel.
   b. The S3 accompany the commander away from the TOC.
   c. Frequent movement of the TOC.
   d. Integration of staff personnel.

7. In the defense, where should the TOC be placed?

8. In the attack, where should the TOC be placed?

9. What must be studied to provide the battalion with the best possible plan for traffic to and from the TOC?

10. a. Who determines the general location of the TOC?
    b. The specific locations?
SOLUTIONS FOR PRACTICAL EXERCISE 2

1. Physical layout and camouflage to preclude visual detection.
   Trafficability in all weather.
   Accessibility to friendly forces.
   Ability to communicate with required units on FM radio.
   Defensibility of the area.

2. Efficiency of the TOC.
   Experience of the personnel.
   Periods of activity.
   Current, around the clock, operations, duty shift arrangements.
   Period of time the TOC is to be operational.
   Integration of operations and intelligence personnel.
   Anticipated frequency of TOC movement.
   (Any five of the above answers are correct.)

3. a.

4. c.

5. b.

6. c.

7. Well to the rear to prevent premature displacement due to the enemy pressure.

8. Well forward to prevent premature displacement forward due to the advancing units.

9. Routes of communication.

10. a. The S3.

     b. The S1 in conjunction with the headquarters commandant.
24. ORGANIZATION FOR CONTROL OF COMBAT OPERATIONS. (TOC)
   a. Each level of command establishes a tactical operation center (TOC) to insure control, coordination, and integration of effort. The S2 and S3 staff sections constitute the nucleus of the TOC. The internal organization must be flexible. The size of elements represented vary with the level of command and operational requirements. The objective of internal organization is to provide quick, responsive, and coordinated staff action.
   b. Primary Functions of the TOC are:
      (1) Validate and evaluate combat intelligence of immediate interest to the commander.
      (2) Control of maneuver forces.
      (3) Control of all immediate fire support means to include tactical air and attack helicopters.
      (4) Coordination of airspace and forward air defense operations.
      (5) Receive, evaluate and process tactical information from subordinate units and higher headquarters.
      (6) Issues instructions to subordinate units.
      (7) Coordinate combat and combat support requirements.
      (8) Remain current on combat service support requirements.
      (9) Submit reports to higher headquarters.
      (10) Graphically depict the friendly and enemy situations.
      (11) Make a continuous estimate of the situation.
      (12) Make recommendations to the commander.
      (13) Prepare and issue operations orders and plans.
      (14) Provide for its own physical security.
   c. There are many measures critical to the survivability of the TOC. These are continuous processes which require as much emphasis as any of the primary TOC functions. These are: Use of minimum essential personnel to man the TOC, frequent TOC displacement; reduction of the TOC's electronic signature by operating radios on reduced power as often as practicable; making messages brief; using directional antennas, remoting radios and changing radio frequencies and call signs often; maximizing the use of camouflage; noise and light discipline and providing for all around physical security.
d. The following significant factors should be considered in locating the TOC:

(1) Will the physical layout and camouflage preclude visual detection?
(2) Is the area trafficable in all weather?
(3) Is the area accessible to friendly forces?
(4) Can the TOC communicate with required units on FM radio?
(5) Is the area physically defensible?

e. Tactical Operation Duty Shifts.

(1) Although the TOE authorizes the S3 section certain personnel, there is no fixed internal organization. The S3 organizes his section to function effectively and to meet the requirements of the situation. In a tactical situation, the S2 and S3 activities are so closely intermingled that both sections are organized as a single entity. Therefore, the S3, in coordination with the S2 organizes the S2-S3 operations portion of the command post. This S2-S3 operation operates on a 24-hour basis, provides a group capability for displacement, and when required, operates a jump, or temporary tactical operations center. The S2 and S3 are often away from the command post to accompany the commander to higher headquarters, to assist the commander in making a reconnaissance, to accompany the commander as a part of the command group during tactical operations, and to provide staff supervision by visits to subordinate units.

(2) For specific S2/S3 and S3 air combat duties refer to ST 7-150-101-5 “Company Commander and Staff Officer Handbook”, Chapter 2.

(3) The following is a suggested organization for TOC duty shifts. This example does not include fire support elements.

<table>
<thead>
<tr>
<th>No. 1</th>
<th>No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3</td>
<td>S2</td>
</tr>
<tr>
<td>S2 Operations NCO</td>
<td>S3 Air</td>
</tr>
<tr>
<td>Ass't Operations Sergeant</td>
<td>Operations Sergeant</td>
</tr>
<tr>
<td>Operations Assistant</td>
<td>Clerk Typist</td>
</tr>
<tr>
<td>*LNO</td>
<td>*LNO</td>
</tr>
</tbody>
</table>

*Augmented to infantry and airborne battalions

NOTE: Specific arrangement of duty shifts at battalion and brigade is often a matter of command policy. Considerations that accompany the decision on how to arrange TOC duty shifts should include, but not be limited to:

(a) Period of time the TOC is to be operational.
(b) Around the clock operations.
(c) Integration of operations and intelligence personnel on every shift.
(d) Anticipated frequency of TOC movement. In tactical situations that demand frequent movement of the TOC, 3 duty shifts might be required.
(e) Experience of personnel.
(f) Vary size of shift to periods of activity.
(g) The principal staff officer should be able to accompany the commander away from the TOC without a reduction in TOC efficiency.

f. Infantry Battalion and Brigade Tactical Operations Center. Examples of TOC arrangements are shown as follows:

AIRBORNE/AMPHIBIOUS BATTALION
INFRantry BATTALION
MECHANIZED BRIGADE
INFANTRY BRIGADE

Figure 2-10
Figure 2-11
Figure 2-12
Figure 2-13
NOTE: Radios remoted from vehicles.

NOTE: Limited FM vehicular capability exists in the air assault battalion. It may be necessary to use the AM voice radio (AN/PRC 74) to communicate with higher headquarters.

Figure 2-10. Airborne and Airmobile TOC.

2-10
NOTE: Radios remoted from vehicle. Radios can be mounted in trailer and operated from Gamma Goat when it is modified. Power source from generator or prime mover.

Figure 2-11. Infantry Battalion TOC

2-11
Figure 2-12. Infantry Brigade (mechanized) TOC

h. Techniques. The following techniques contribute to efficiency of a TOC:

(1) Map boards and acetate drops in the TOC for the S2, S3, FSO, etc., be uniform and interchangeable.
(2) Preprinted operation orders (fill-in-the-blank-type) be available for use when time does not permit reproduction of the original.
(3) Unit positions may be depicted by the use of color coded pins.
(4) Map boards may be constructed with a plexiglass cover.
(5) All TOC personnel be aware of recurring reports to higher headquarters.
(6) All TOC personnel be thoroughly familiar with the current situation.
(7) Radio call signs should be visible to TOC personnel for quick reference.
(8) Location of the commander should be known by TOC personnel.

i. Tactical Operation Center Activities and Functions. Refer to Section V. Activities. Appendix J. Tactical Operations Center, FM 101-5, for detailed list of activities for accomplishment of the TOC mission.

j. Tactical Employment of the Tactical Operation Center. Refer to Section IV. Appendix J. FM 101-5.

2-5. DISPLACEMENT OF THE TOC.

a. Displacement is planned and implemented to cause minimum interference with normal operations. Changes in the enemy or friendly situation may dictate that a temporary or jump TOC be located forward or to the rear of the main TOC. The configuration of a jump TOC at battalion and brigade level depends on the commander and often the experience of the S2 and S3. The jump TOC may consist of the commander, the S3, and FSO in the commander’s vehicle at a location where the tactical situation can be controlled. The jump TOC may also consist of an M577 manned by personnel who monitoring the situation, will assume responsibility as NCS and control headquarters until the main TOC becomes operational at the same or different location.

b. Considerations for the jump TOC in matters of site selection, techniques, and functions are the same as those for the main TOC. A reduction in efficiency will occur if the jump TOC is expected to maintain its role for an extended period of time as the single control element.
Figure 2-13. Infantry Brigade TOC

c. If displacement of the main TOC and CP is required, the S3 coordinates with the communication officer and the HQ cmdt representing the S1 before recommending to the commander a new general CP location and a time for displacement. Prior to displacement, the HQ Cmdt coordinates with the following:

(1) The S2 for weather forecast, road conditions, and enemy situation.
(2) S4 for transportation and logistical considerations.
(3) S5 for civil military considerations
(4) Communications officer.
(5) S3 (who coordinates with higher headquarters).

d. The quartering party, consisting of the quartering officer (headquarters commandant representing the S1), a security element, communications personnel and representatives of the various staff sections that will occupy space in the CP area, move to the general location of the new CP. After the quartering officer selects the exact CP site, he designates the location of each facility and post guides to direct incoming elements into position. The quartering officer notifies the TOC when arrangements have been completed from displacement.

e. Displacement in two echelons insures continuous control of operations. The forward echelon consists of the command group. See Figure 2-14. As this echelon moves to the new area and prepares for operations, the remainder of the CP continues to operate, in the old location under the executive officer. Higher headquarters and organic, attached, and supporting units are notified of the exact location and time of opening of the new CP. Upon assumption of control by the forward echelon, the remainder of the old CP moves to the new location.

f. Occasionally, the CP displaces as a unit. Command and control is exercised by the command group while moving.
Lesson 3
PREPARE AN OPERATIONS ESTIMATE

The task taught in this lesson is performed by a battalion S3. It consists of:

- Identifying the format for an operations estimate
- Analyzing the mission and determining considerations affecting the possible courses of action
- Developing, analyzing, and comparing courses of action, which lead towards a recommendation.

**Task:** Prepare an operations estimate.

**Condition:** Given extracts of doctrinal literature pertaining to the preparation of an operations estimate, a map, overlays, a simulated tactical situation, a battalion task force operation order, an intelligence estimate, additional information in a continuation of the situation, and a series of multiple-choice questions relating to tactical reasoning or tactical situation.

**Standard:** Correctly answer multiple-choice questions dealing with the format, technique, and mental process of making an operations estimate leading to the S3's recommendation to the commander.

**EXERCISE 1: IDENTIFYING THE FORMAT FOR AN OPERATIONS ESTIMATE**

**Introduction**

The operation estimate is an analysis of all factors affecting reasonable and practical courses of action that will accomplish the mission. It is made to determine a recommended course of action for accomplishing the mission and may include the impact of operations on friendly forces. The format of the operation estimate is the same as the tactical commander's estimate except paragraph 5 is a recommendation not a decision. The operation estimate is a modified version of the general format for an estimate of the situation. Normally, estimates at battalion level are not formal written documents; however, the S3 should use the format for an estimate of the situation as a guide and checklist.

Section III on pages 3-1 and 3-2 from ST 7-150 FY 79 provides a description of the format of an operations estimate and the contents of each of its elements. An extract of these pages is located at the end of this lesson on pages 81 and 82 in the subcourse. Read it now before proceeding with this exercise.

The S3 uses information, conclusions, and recommendations from other pertinent estimates such as the S2's intelligence estimate in analyzing his problem. He may incorporate some of this material into his estimate but he alone is responsible for the content of his operations estimate. Estimates are updated continuously as factors that affect operations are changed, new facts are determined, assumptions are replaced by facts or rendered invalid, or changes to the mission are received or indicated.
How the S3 or any estimator arrives at a recommendation is a matter of his personal determination; however, sound decisions result only from a thorough, clear, unemotional analysis of all data pertinent to the situation. Because modern military problems are complex, the organization and consideration of data in a certain sequence makes logical analysis easier and the production of sound conclusions more likely. This format is a logical and useful one but is not rigid. The estimator does not have to complete one paragraph before he goes to the next. He may make many small analyses or estimates within the overall estimate and refer frequently to material as necessary. The format is valuable as a checklist. It insures the consideration of significant aspects and serves as a base or a reference point for updating the estimate.

PRACTICAL EXERCISE 1

You have completed the instructional material for Exercise 1, an operations estimate. Check your ability to identify the format for an operations estimate by answering the following questions. Answer as many questions as possible without looking back at any of the instructional material. The solutions will be found at the end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. The difference between the S3's estimate and the tactical commander's estimate is that the S3's estimate ends in ____________________________________________________________.

2. How the S3 or any estimator arrives at a recommendation is a matter of his ____________________________________________________________________.

3. True or False: Normally, estimates at battalion level are formal written documents. ________________________________________________________________.

4. In paragraph 3 of the operations estimate, the S3 is:
   a. Determining all facts or assumptions that have a bearing on the situation.
   b. Determining through analysis the probable outcome of each course of action.
   c. Comparing courses of action in terms of significant advantages and disadvantages.
   d. Translating through analysis the selected courses of action into a complete recommendation.

5. The comparison of "own courses of action" is which step of the estimate process?
   _______________________________________________________________________

6. In determining the situation and courses of action, what are the three major considerations which have a bearing on how the mission will be accomplished? _____________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

58
7. Which paragraph involves a statement of the task and its purpose?

_________________________________________________________________________

8. During which step (paragraph) of the estimate process will you translate the course of action selected into a complete statement as to the action to be taken?

_________________________________________________________________________

9. What is the purpose of Paragraph 3 of the estimate process?

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

10. What should be included in the recommendation statement, as appropriate?

_________________________________________________________________________

11. Although in general terms, own courses of action are formulated in ___________________

_________________________________________________________________________

12. True or False: A separate analysis is made for each of the own courses of action.

_________________________________________________________________________

13. During the comparison of own courses of action, what will influence the estimator's determination as to the best course of action? _____________________________________

_________________________________________________________________________

14. During the analysis of friendly options you must determine the effects of ___________ on the course of action being considered and on the ____________________

_________________________________________________________________________

15. True or False. The format for an estimate of the situation is logical, useful, and rigid.

_________________________________________________________________________

16. Memorize and list, in order, the five paragraphs of an operation estimate.

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
SOLUTIONS FOR PRACTICAL EXERCISE 1

1. A recommendation.

2. Personal determination.

3. False.

4. b.

5. Fourth.

6. Considerations affecting possible courses of action; opposing conditions (enemy capabilities); own courses of action.

7. Mission (or problem).

8. Decision (or recommendation).

9. To determine the advantages and disadvantages of each of the own courses of action.

10. WHO, WHAT, WHEN, WHERE, HOW, and WHY.

11. Sufficient detail to distinguish one from the other and to provide a basis for a flexible analysis.

12. True.

13. His evaluation of advantages and disadvantages which in his judgement are more significant than others.

14. The facts established in 2a (considerations affecting possible courses of action); opposing conditions (enemy capabilities) established in 2b.

15. False.

   The situation and courses of action.
   Analysis of opposing courses of action.
   Comparison of own courses of action.
   Recommendation.
EXERCISE 2: ANALYZING THE MISSION AND DETERMINING CONSIDERATIONS AFFECTING POSSIBLE COURSES OF ACTION

To prepare an operations estimate, the S3 must consider the mission and situation. The mission is a statement of the tasks and their purposes as seen by the commander issuing the mission. The commander will always prestate the mission within his planning guidance. His restated mission will include the sequence and priority in which all tasks are to be accomplished. He may also include any specific course of action he desires the staff to consider or reject when making their estimates. Additionally, the commander may identify key terrain within the area of operation.

A mission will not always clearly identify all of the tasks which must be performed. The mission from higher headquarters will identify the basic combat action to be taken such as attack, defend, delay, screen, block, move, or reinforce. These tasks are referred to as specified or directed tasks. Additional tasks essential for mission accomplishment must be determined by the commander or S3. These additional tasks are called implied tasks and should be major tasks that are essential to the accomplishment of the mission. They should not be the routine or SOP tasks that must be performed to accomplish most tactical missions. Neither should these tasks be of the type that are inherent responsibilities of the commander, e.g., providing flank protection for his own unit. These SOP and inherent tasks, as well as other tasks that are of less than major magnitude in relation to the assigned mission, may very well be of concern to the commander, and he may appropriately address them in his planning guidance. The implied tasks, which will be included in the restated mission, should be limited to major tasks that are essential to the accomplishment of the mission. Whether or not implied tasks are identified during mission analysis depends on the mission that is received and the judgment of the commander. At corps and above, the missions received are usually stated in general terms, and implied tasks are frequently identified. At division and below, where the missions received are more detailed, fewer implied tasks will be identified.

Once the S3 has identified all specified and implied tasks he will proceed to the next step of the estimate process, the situation and courses of action. He must determine all tactical requirements that affect possible courses of action for a given situation. In order to determine the tactical requirements of the situation, the S3 must consider METT (mission, enemy situation, terrain and weather, time and troops available). The mission and considerations affecting possible courses of action are spelled out on pages 3-3 and 3-4 of ST 7-150 FY 79. An extract of these pages is found at the end of this lesson on pages 83 and 84 in the subcourse. Read these pages now.

In order to determine the possible courses of action the S3 must ask himself the following types of questions:

- How will the terrain affect our attack?
- Of the avenues of approach given to us by the S2, which is the best to our objective?
- What recent and present significant activities did you detect in this situation?
- What peculiarities and weaknesses are there?
- What are the enemy's capabilities with respect to our unit?
- How will the weather affect our attack?

**PRACTICAL EXERCISE 2**

You have now completed the instructional material for Exercise 2. Check your ability to determine considerations affecting the possible courses of action by answering the following questions. Answer as many questions as possible without looking back at the instructional material. The solutions will be found at the end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. While studying the mission or problem, the S3 must identify all ______________________
   ____________________________________________________________________________
   tasks.

2. As a battalion S3 you will identify the specified or directed tasks of your mission from____
   ____________________________________________________________________________.

3. As the S3, in order to determine the tactical requirements of the situation, you must consider
   ____________________________________________________________________________
   ____________________________________________________________________________.

4. As the S3, in determining and arranging considerations affecting the possible courses of
   action you will identify characteristics of the area of operations. The two major
   characteristics are______________________________________________________________
   ____________________________________________________________________________.

5. As the S3 you will also consider the enemy situation including enemy ________________
   ____________________________________________________________________________
   ____________________________________________________________________________.

6. As the S3 you will also consider your own situation including________________________
   ____________________________________________________________________________
   ____________________________________________________________________________.

7. As the S3 you will consider the friendly situation and the enemy situation to
determine ______________________________________________ for a specific situation.

8. Combat power is significant only in relation to the combat power of___________________
   ____________________________________________________________________________.

9. The better the S3 understands the ____________________________, the
   ____________________________________________________________________________
   and ___________________________________, the
   more sound his analysis will be.

10. What is the purpose of the operations estimate? _____________________________
    ____________________________________________________________________________
11. In application, the S3 already knows many of the facts that concern the mission. However, if assigned a new mission he normally needs to __________________________________________________________
________________________________________________________________________
________________________________________________________________________.

12. To determine characteristics of the area of operation, the S2 provides the S3 with his __________________________________________________________
The S3 considers the influence these characteristics have on __________________________________________________________
________________________________________________________________________

13. What are the five military aspects of terrain?
________________________________________________________
________________________________________________________.

14. When determining characteristics of weather, the primary emphasis should be placed on
________________________________________________________.

1. Directed; implied.

2. The mission of higher headquarters.

3. METT (mission, enemy, terrain and weather, time and troops available).

4. Weather and terrain.

5. Disposition, composition, strength, recent activities and weaknesses.

6. Disposition, composition, strength, morale, status of training, civil affairs, logistics and reinforcements.

7. Relative combat power.

8. An opposing force.

9. Characteristics of the area of operation; enemy and own situation; enemy capabilities.

10. To arrive at a recommendation as to the best scheme of maneuver to accomplish the mission.

11. Review and update his knowledge of the situation, obtain additional information and revise his appreciation of the effect these facts may have on the mission.

12. Analysis of weather, terrain, and other aspects of the area of operation; enemy and friendly actions.

13. Observation and fire, cover and concealment, obstacles, key terrain, and avenues of approach.

EXERCISE 3: DEVELOPING, ANALYZING, AND COMPARING COURSES OF ACTION WHICH LEAD TO A RECOMMENDATION

Developing Courses of Action

There are several techniques by which courses of action may be formulated. Paragraph C, Own Courses of Action, on page 3-5 of ST 7-150 FY 79 details this step of the estimate process. An extract of this page is located at the end of this lesson on page 85 of the subcourse. Read it now.

Tactical courses of action if will normally not convey complete schemes of maneuver at the beginning; however, they will provide an easy and flexible basis for beginning the analysis. Each course of action will be developed into a general scheme of maneuver as it is analyzed.

An attack course of action is stated in terms of the direction and the objective of the main attack; however, in some situations it may be necessary to make the enemy force the objective rather than a geographical terrain feature. In other cases, the distance to the objective, uncertainty about the enemy situation, or the size of the objective may make main and supporting attacks not feasible. Courses of action may then be formulated in terms of formation, rather than in terms of the main attack.

If the commander announces key terrain to be seized, the S3 uses this information in formulating courses of action. This key terrain will normally become an objective.

The S3 must then consider the avenues of approach leading to this terrain, and formulate courses of action that lead to and terminate at that terrain feature. The S3 initially uses the avenue of approach as announced by the S2 in his intelligence estimate.

The S3 may determine that there are two or more pieces of terrain within the objective area whose seizure would give his unit the opportunity for success. In this case, he would identify each terrain piece as an objective to be seized by a maneuver element. The S3 must ultimately determine which piece of terrain will become the objective for the main attack while developing the complete scheme of maneuver. Considerations other than key terrain will now take on added significance.

At brigade and battalion levels, an informal relationship exists between the commander and the S3 with regard to possible courses of action. Although there may be no formal recommendation of courses of action by the S3 for the commander's approval, they do mutually agree on the possible courses of action open to them after studying the mission. It is a responsibility of the S3 to formulate courses of action under consideration.

Analysis of Opposing Courses of Action

The S3 is ready to analyze each formulated course of action after considering the pertinent factors of the situation, determining the enemy's capabilities, and formulating own courses of action.
Techniques of Analysis

One technique of analysis is to consider all the factors affecting your courses of action while moving from your present location toward your objective. Examples of these factors include enemy capabilities, weather, and terrain. Another technique of analysis is to consider one factor at a time while moving from your present location to your objective. Each factor would be analyzed independently of the other. This technique, however, is not as appropriate as the first technique in making a mental estimate. The analysis process is speeded up when analyzing all of the pertinent facts at the same time.

Steps of Analysis

The S3 must first determine the conditions or facts that face him. He then determines if the effect or implication of this fact is an advantage or disadvantage based upon his professional knowledge and judgement. For example, a river that is fordable with some difficulty creates a natural obstacle and is obviously a disadvantage. The S3 may realize that engineer support would be helpful in assisting the crossing. This matter is fallout from the analysis and should not be allowed to cloud the principal issue. The S3 would then continue his analysis by war-gaming each course of action.

In this course of his analysis, the S3 may introduce a new course of action, make a major change in one being considered, or eliminate one from further consideration. Upon completion of his analysis, the S3 develops the general scheme of maneuver that will be employed for each course of action. His general scheme of maneuver (in a coordinated attack) will consist of a main attack, a supporting attack, and a reserve. The main attack is the course of action under consideration. What will actually be developed is the supporting attack and the reserve.

Comparison of Own Courses of Action

After analyzing the courses of action, the S3 must:

- Review and evaluate the advantages/disadvantages determined during his analysis
- Compare the courses of action
- Select a scheme of maneuver for his recommendation.

Paragraph 4, Comparison of Own Courses of Action, and paragraph 5, Recommendation, on pages 3-6 and 3-7 from ST 7-150 FY 79 provide additional information on the steps leading up to making a recommendation. An extract of this page is found on pages 86 and 87 in the subcourse. Read paragraphs 4 and 5 now.
Recommendation

The S3 uses elements contained in the mission and situation (who, what, when, why) and elements developed during his analysis (how and where) to develop the recommendation.

Prior to the recommendation being made, the S1 and S4 would confirm with the S3 that they could or could not support courses of action being considered. Normally all courses of action can be supported administratively and logistically at battalion and brigade level. The degree of support provided for each course of action would be carefully considered by the S3 before submittal of the staff recommendation.

An example of an operations estimate begins on page 67. Read it now before proceeding to Practical Exercise 3.

OPERATIONS ESTIMATE NO. 16

(CLASSIFICATION)
S3 TF 4-71
NR 736242
101430A OCT
BCA

Reference: Map, Series M725 Germany, Sheet L4923 (WEISBATTEN) and L4925 (KRAILBERG), 1:50,000, Edition 1.

1. Mission

TF 4-71 attacks 110600 Oct to seize HILL's 283 (NR4631) - 327 (NR4726) and HILL's 383 (NR5127), and 350 (NR5031).

2. The Situation and Courses of Action

   a. Considerations affecting the possible courses of action: Refer to Intelligence Estimate No. 16, The Area of Operations, and Enemy Situation.
   b. Enemy Capabilities. Intelligence Estimate No. 16. The enemy will defend.
   c. Own course of action (C/A):
      (1) C/A #1: Attack 110600 Oct in the direction of HILL 283 to seize HILL 283, continuing the attack in the direction of HILL 383 to seize HILL 383. Attack 110600 Oct in the direction of HILL 327 to seize HILL 327, continuing the attack in the direction of HILL 350 to seize HILL 350.
      (2) C/A #2: Attack 110600 Oct in the direction of HILL 350 to seize HILL 350, continuing the attack in the direction of HILL 383 to seize HILL 383. Attack 110600 Oct in the direction of HILL 327 to seize HILL 327, continuing the attack in the direction of HILL 283 to seize HILL 283.
3. Analysis of Opposing Courses of Action

   a. Course of Action #1:
      (1) Advantages:
          (a) Cover and concealment along proposed route of advance is good.
          (b) The weather forecast is favorable.
          (c) No major redispersion of forces would be required for either continuation of the
              attack or defense upon seizure of HILL 283 if this course of action is selected.
          (d) S2 rates this approach best from a terrain standpoint.
          (e) There is sufficient maneuver space.
          (f) Trafficability appears excellent.
      (2) Disadvantages:
          (a) Observation and fire are poor in the areas of dense foliage southwest of HILL 283.
          (b) En infantry element in prepared positions vic NR458304 (need indirect fire support).
          (c) En armor vic NR460307 (AT elements required).

   b. Course of Action #2:
      (1) Advantages:
          (a) Cover and concealment is fair with the exception of the open area along the trail in
              the vicinity of NR458191.
          (b) The weather forecast is favorable.
          (c) No major redispersion of forces would be required for either continuation of the
              attack or defense upon seizure of HILL 327 if this scheme of maneuver is selected.
      (2) Disadvantages:
          (a) S2 rates second best from a terrain point of view.
          (b) Observation and fire is poor.
          (c) En obstacles to include mines and barbed wire will canalize movement southwest of
              HILL 327 vic NR469255.
          (d) En armor vic NR466262 (AT elements required).
          (e) En rifle platoon in prepared positions vic of NR463260 (indirect fire support
              required).
          (f) Steep slope leading directly to HILL 327 along the Axis of Advance may cause a
              shift in movement direction making the distance longer.

   c. General Scheme of Maneuver:
      (1) Course of Action #1: Bn/TF atks with one company team making the main attack in the
          direction of HILL 283 to seize HILL 283, continuing the attack in the direction of HILL 407 to seize
          HILL 407; and one company team making a supporting attack in the direction of HILL 327 to seize
          HILL 327 and continuing the attack in the direction of HILL 383 to seize HILL 383. One company Tm
          in reserve.
(2) Course of Action #2: Bn/TF atks with one-company team making the main attack in the
direction of HILL 327, to seize HILL 327, continuing the attack in the direction of HILL 283 to seize
HILL 283 and one company team making a supporting attack in the direction of HILL 383 to seize
HILL 383, continuing the attack in the direction of HILL 350 to seize HILL 350. One company team in
reserve.

4. Comparison of Own Courses of Action

   a. Course of Action #1:
      (1) Significant advantages:
         (a) Cover and concealment is good.
         (b) Best terrain avenue of approach.
      (2) Significant disadvantages:
         (a) Observation and fire is poor in areas of dense foliage.
         (b) Enemy is positioned in depth requiring the main attack to overcome enemy resistance
             and obstacles.

   b. Course of Action #2:
      (1) Significant advantages:
         (a) No major redispersion of forces would be required for either continuation of the
             attack or defense upon seizure of the objective.
         (b) Cover and concealment is fair.
      (2) Significant disadvantages:
         (a) Observation and fire is poor.
         (b) En obstacles.
         (c) Steep terrain.

   c. Conclusion: C/A #1 offers the greatest probability of success. It provides the best cover and
      concealment and terrain trafficability.

5. Recommendation

   TF 4-71 attacks 110600 Oct with one Co/Tm making the main attack in the direction of HILL
283 to seize HILL 283, continuing the attack in the direction of HILL 383 to seize HILL 383; one
Co/Tm making a supporting attack in the direction of HILL 327 to seize HILL 327, continuing the
attack in the direction of HILL 350 to seize HILL 350. One Company/Team will be in reserve.

   Shwartz
   S3

PRACTICAL EXERCISE 3

You have completed the instructional material for Exercise 3. Check your ability to develop, analyze,
and compare courses of action leading to a recommendation by answering the following questions.
Answer as many questions as possible without looking back at any of the instructional material. The
solutions will be found at the
end of this exercise. If you do not understand an answer, review the portion of the instructional material which provides the information.

1. As the S3 you will formulate courses of action in terms of the elements of
   ________________________________________________________________________
   ________________________________________________________________________

2. If the commander announces key terrain to be seized you will designate this terrain as the
   ________________________________________________________________________

3a. As the S3 in formulating a course of action in an attack situation you will consider the
    enemy capabilities to: (two choices only)
    a. Defend or delay.
    b. Attack.

3b. As the S3 in defensive situations you will consider enemy capabilities to:
    (two choices only)
    a. Defend or delay.
    b. Attack.

4. In order to formulate courses of action, the S3 uses ________________________________
   __________________________________________________ the prepared by the S2.

5. After what point in the estimate process will the S3 develop the general scheme of
   maneuver for each course of action? ____________________________________________
   ________________________________________________________________________

6. When developing the scheme of maneuver you are formulating the elements of:
   a. Where and why.
   b. What and where.
   c. Where and how.
   d. How and why.

7. When analyzing the courses of action, matters which may not directly pertain to the scheme
   of maneuver may come to your attention. As the S3 you should not allow these matters to
   ________________________________________________________________________

8. In a coordinated attack the scheme of maneuver will normally include the ______________
   ________________________________________________________________________

9. What is the purpose of Step 3, "The Analysis of Opposing Courses of Action"?
   ________________________________________________________________________

10. As the S3, in step 4 "Comparison of Own Courses of Action," you will first review and
    evaluate the ________________________________
You will then compare the courses of action in terms of the __________________________.

11. When preparing the recommendation, the S3 considers the conclusions of other ________

12. Write an example of a course of action stated in terms of the direction and objective. _____

13. Write an example of a course of action stated in terms of formation. ___________________

14. You are the battalion S3 of TF 1-51 and are about to prepare your operations estimate. Use
the information given to you in the task organization, the intelligence estimate, and the
operation overlay found after page 74 in the subcourse, and a map, series M745 Germany,
sheets L5322 and L5324, which was furnished to you, to write out your operation estimate
using the Operations Worksheet found on pages 75 through 77.

Task Organization: TF 1-51

<table>
<thead>
<tr>
<th>Tm A</th>
<th>Co B</th>
<th>Tm C</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/1-51 Mech</td>
<td>B/1-51 Mech (-)</td>
<td>C/1-51 Mech</td>
</tr>
<tr>
<td>1/A/1-34 Armor</td>
<td>AT Sec</td>
<td>2/A/1-34 Armor</td>
</tr>
<tr>
<td>AT Sec</td>
<td></td>
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<table>
<thead>
<tr>
<th>Tm IRON</th>
<th>Bn Con</th>
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</thead>
<tbody>
<tr>
<td>A/1-34 Armor (-)</td>
<td>Hv Mort Plt</td>
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<tr>
<td>1/B/1-51 Mech</td>
<td>AT Plt</td>
</tr>
<tr>
<td></td>
<td>Redeye Sec</td>
</tr>
<tr>
<td></td>
<td>1/A/25 Engr (DS)</td>
</tr>
</tbody>
</table>

INTELLIGENCE ESTIMATE NO. 18

Reference: Map, series M745 Germany, sheets L5322 (LAUTERBACH) and L5324 (HUNFELD) 1:50,000, Edition 1.
1. Mission

TF 1-51 attacks 090545 Oct to seize OBJ 451.

2. The Area of Operations

   a. Weather:

      (1) Existing situation: 72 hour forecast indicates no significant or adverse weather conditions within the area of operations.

         9 Oct - Weather will be partly cloudy to clear. Temperatures will range from 47 to 65°F Fahrenheit; wind from the east from 6 to 12 knots.

         10 Oct - Scattered clouds until 1030. Temperatures will range from 45 to 60°F Fahrenheit. Wind from the east from 5 to 10 knots.

         11 Oct - Clear throughout the day. Temperature will range from 47 to 65°F Fahrenheit, wind from the east from 6 to 12 knots.

      (2) Effect on enemy courses of action: Periods of unrestricted visibility will favor his defense. Wind will favor his use of NBC weapons.

      (3) Effect on friendly courses of action: Periods of unrestricted visibility will favor our attack if we achieve air or arty superiority; will enhance command and control measures. Current dry spell will make the terrain more trafficable. The wind will not favor our use of smoke.

   b. Terrain:

      (1) Existing Situation:

         (a) Observation and fire. Enemy observation and fire will be restricted by the dense forests, vicinity of KUGELBERG Ridge. However, he will have excellent short-range observation of the highway, clear area vic SASSEN, and the slopes vic ROTHEBACH.

         Several steep slopes and valleys may hinder our advance to the objective and influence our Axis of Advance. Observation and fields of fire may be hampered by dense forests and terrain irregularities.

         (b) Cover and concealment. Excellent concealment from ground and air observation will be provided to the enemy by the forested regions vicinity KUGELBERG Ridge and HALSBERG Ridge.

         (c) Obstacles. Steep terraced slopes will present a natural obstacle particularly those in vicinity of ROTHEBACK, HILL 371. The towns of WERNGES and MAAR may present an obstacle. Small streams and marsh areas may affect trafficability. The minefield vic NB290125 will impede the advance. Barbed wire and trenches present within OBJ's 451 and 452.

         (d) Key terrain. HAIDBERG Ridge NB303146, HILL vic NB297134, HILL 422 (NB279148), BILSKUPPE HILL (NB278139), HILL 350
(NB283113), high ground south of MAAR (NB277119).

(e) Avenues of approach.

1. AA #1. Axis NB317168 - HILL 341 (NB299151) - WERNGES (NB297143) -
   HILL vic NB297134 - (OBJ 451).

   Initially, observation and fields of fire restricted by steep sloping terrain from
   LD/LC to WERNGES. From WERNGES on, observation and fire appear excellent. Cover and
   concealment good initially from LD/LC to approximately 500 meters NE of HILL 341. From that point
   on cover and concealment is poor. This avenue passes through town of WERNGES which may present
   an obstacle. This avenue contains steep slopes, a minefield, trenches, and barbed wire obstacles. Seizes
   key terrain HILL vic NB297134 and terminates on OBJ 451. Ease of movement will be restricted by
   forests, slopes, and streams.

2. AA #2. Axis NB296175 - NB294164 - NB276158 - HILL 422 vic NB279148 -
   BILSKUPPE HILL vic NB278139 - (OBJ 451).

   Initially, observation and fields of fire will be restricted by dense forests and steep
   terrain until approximately 200 meters north of HILL 422. From that point on observation and fields of
   fire are excellent. Cover and concealment is excellent until approximately 200 meters north of HILL
   422. From that point on cover and concealment is poor. This avenue of approach passes through town
   of MAAR which may present an obstacle. Steep slopes are present north of MAAR. Seizes key terrain
   BILSKUPPE HILL (NB278139) and terminates on OBJ 451. Ease of movement may be restricted by
   slopes and streams.

   (2) Effect on enemy courses of action. The terrain favors the enemy's defense. Steep sloping
terrain leading to the objective appears to be the greatest obstacle.

   (3) Effect on friendly courses of action. The terrain does not favor our attack. Our best
avenue of approach is AA#2, because it provides the best cover and concealment leading to the
objective and HILL vic NB297134 provides our forces with excellent observation and direct fire
capabilities.

3. Enemy Situation

   a. Disposition: See Operation Overlay TF1-51.

   b. Composition: Enemy forces in the area of operations consist of a motorized rifle company.

   c. Strength:

      (1) Committed forces: Unknown.

      (2) Reinforcements: Unknown.

      (3) Air: Enemy is capable of achieving air superiority for short periods of time.

      (4) Nuclear: Enemy is capable of employing an unknown number of nuclear rounds of an
undetermined yield.

   d. Recent and Present Significant Activities:

      (1) Preparation of obstacles along front.

      (2) Entrenchments occupied throughout the objective area.

   e. Peculiarities and Weaknesses: Operations. Enemy position positively identified.
4. Enemy Capabilities

a. Enumeration:
   (1) Attack: Highly unlikely due to size of unit and extensive preparation of objective.
   (2) Defend now in present positions with committed forces supported by all available artillery, air, and nuclear weapons.
   (3) Delay at the time of our attack with committed forces in present and successive positions supported by all available artillery, air, and nuclear weapons.
   (4) Reinforce his defense with elements unknown.
   (5) Withdraw all committed forces at any time.
   (6) Gain local air superiority for a short period of time.
   (7) Employ an unknown number of nuclear weapons of an undetermined yield.

b. Analysis and Discussion:
   (1) Attack: There is no significant indicator at this time to support an attack course of action.
   (2) Defense:
      (a) Preparation of artificial obstacles (barbed wire and a minefield).
      (b) Preparation and occupation of trench lines within objective area.
   (3) Delay:
      (a) Same as (a) and (b), Defense.
      (b) Alternate and successive positions throughout zone of action.
   (4) Withdraw: May withdraw at any time.
   (5) Reinforce: Unknown.
   (6) Air: Air threat remains without significant indicators.
   (7) Nuclear: Nuclear threat remains; delivery system unlocated.

5. Conclusions

a. Utilization of Terrain: AA #1 is best.
b. Probable Courses of Action: The enemy will defend at the time of our attack.
c. Vulnerabilities:
   (1) Enemy is vulnerable to flank attack.
   (2) River to rear of location will inhibit withdrawal.
Using this worksheet, write out your operations estimate now.

**OPERATIONS WORKSHEET**

(Step 2c) Own Courses of Action

C/A #1:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

C/A #2:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

(Step 3) Analysis of Opposing Courses of Action

C/A #1 Advantages:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

C/A #1 Disadvantages:

____________________________________________________________________________________
____________________________________________________________________________________
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C/A #2 Advantages:

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____________________________________________________________________________________
C/A #2 Disadvantages:

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____________________________________________________________________________________
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____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

General Scheme of Maneuver:

Course of Action #1:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Course of Action #2:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

(Step 4) Comparison

C/A #1 Significant Advantages:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

C/A #1 Significant Disadvantages:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

C/A #2 Significant Advantages:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

C/A #2 Significant Disadvantages:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Conclusion:
____________________________________________________________________________________
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____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
(Step 5) Recommendation

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

77
SOLUTIONS FOR PRACTICAL EXERCISE 3

1. What, when, where, how, and why.
2. Objective of the main attack.
3a. a.
3b. b.
4. Intelligence estimate.
5. After determining the advantages and disadvantages of each course of action.
6. c.
7. Cloud the principal issue.
8. Main attack, supporting attack, the reserve.
9. To determine the advantages and disadvantages and develop a general scheme of maneuver for each own course of action.
10. The advantages and disadvantages that were determined during the analysis; general scheme of maneuver for each own course of action.
11. Staff estimates.
12. Attack 090700 Mar in the direction of OBJ RED and continue the attack to seize OBJ BLUE.
13. Attack 090700 Mar with two companies abreast; one company to seize OBJ RED, one company to seize OBJ BLUE.
14. The operations estimate below contains two sample courses of action, an analysis of their advantages and disadvantages, and a final recommendation. These are not the only two courses of action and each course of action is not right or wrong. As the S3 you should reach a conclusion as to the general scheme of maneuver offering the greatest probability of success. Use the solution as an aid and compare your operations estimate with the solution to see how close you are and why.

2c. Own Courses of Action (C/A) (refer to page 67, para 2c)

C/A #1
TF 1-51 will attack 090545 Oct along AA#1 in the direction of OBJ 451 to seize OBJ 451.

C/A #2
TF 1-51 will attack 090545 Oct along AA#2 in the direction of OBJ 451 to seize OBJ 451.
3. Analysis of Opposing Courses of Action

a. C/Al #
   (1) Advantages:
       (a) Cover and concealment good initially.
       (b) Weather forecast is favorable.
       (c) S2 rates this best from a terrain standpoint.
       (d) There is sufficient maneuver space.
       (e) Trafficability appears excellent due to current dry spell.
   (2) Disadvantages:
       (a) Observation and fire is poor initially.
       (b) Town of WERNGES may present an obstacle.
       (c) Steep slopes and forests will impede movement.
       (d) A minefield, barbed wire, and trenches will present obstacles.

b. C/A #2
   (1) Advantages:
       (a) Cover and concealment is excellent, initially.
       (b) Weather forecast is favorable.
       (c) There is sufficient maneuver space.
       (d) Trafficability appears excellent due to current dry spell.
       (e) This Axis affords opportunity to engage enemy on his flank.
   (2) Disadvantages:
       (a) Observation and fire poor initially.
       (b) S2 rates as second best from terrain standpoint.
       (c) Town of MAAR may be a significant obstacle.
       (d) Steep slopes, forests, and streams may impede movement.
       (e) Barbed wire, a minefield, and trenches may present obstacles.
       (f) Large open area from HILL 422 to OBJ 451 provides no cover and concealment.

c. General Scheme of Maneuver:
   (1) Course of Action #1:
       TF 1-51 attacks with two company teams abreast along AA#1 in the direction of OBJ 451 to seize OBJ 451. One company team in reserve.
   (2) Course of Action #2:
       TF 1-51 attacks with two company teams abreast along AA#2 in the direction of OBJ 451 to seize OBJ 451. One company team in reserve.

4. Comparison of Own Courses of Action

a. C/A#1:
   (1) Significant advantages:
       (a) Cover and concealment is good.
       (b) Best terrain avenue of approach.
   (2) Significant disadvantages:
       (a) Observation and fire is poor in areas of dense foliage and steep terrain.
       (b) Positioning of enemy obstacles.
b. C/A #2
   (1) Significant advantages:
       This axis affords opportunity to engage enemy on his flank.
   (2) Significant disadvantages:
       Cover and concealment is poor from HILL 422 to OBJ 451.

c. Conclusion:
   C/A #1 offers the greatest probability of success. It provides the best
   over and concealment and fields of fire from intermediate objective.

5. Recommendation

   TF 1-51 will attack 090543 Oct with two company teams abreast along AA#2
   in the direction of OBJ 451 to seize OBJ 451. One company team in reserve.
**ESTIMATE OF THE SITUATION**

**Section 1. BASIC ESTIMATE OF THE SITUATION**

3-1. **DEFINITION AND PURPOSE.**

a. The estimate of the situation is a mental problem solving process. Its purpose is to arrive at the best way to accomplish a task or mission. Since many people do things differently, an orderly approach is necessary in arriving at any solution. The estimate is designed to provide a systematic analysis of all essential data to arrive at sound decisions. It follows the five basic steps shown below:

1. Know the problem.
2. Assemble all facts which bear on the problem, determine opposing conditions, and seek out various possible solutions.
3. Analyze each possible solution to determine its advantages and disadvantages.
4. Compare the possible solutions and select the one most likely to best solve the problem.
5. Translate the selected possible solution into a decision.

b. As may be seen, this is nothing more than an orderly arrangement of information to assist anyone in solving a problem.

c. To assist in this process, there is a prescribed basic form applicable in any situation and at any echelon or level of command. Commanders and staff officers use this basic form for solving any problem, either non-tactical or tactical in nature.

**3-2. FORMAT FOR AN ESTIMATE OF THE SITUATION.**

a. A format for the estimate of the situation has been developed to assist the estimator. This format is an aid, not a formula, in applying thoroughness, judgment and professional knowledge to the situation at hand to reach sound conclusions and decisions. The basic format for an estimate of the situation is shown in Figure 3-1.

b. The estimate of the situation is a continuing mental process. With each change in the situation, the estimate is revised and the course of action is modified as appropriate. It is as thorough as time and circumstances permit. It may vary from a short, almost instantaneous process, when the requirement for a decision is urgent, to a long, complex, and detailed process requiring coordination by the entire staff.

<table>
<thead>
<tr>
<th>ESTIMATE OF THE SITUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. DIRECTED TASKS</strong></td>
</tr>
<tr>
<td><strong>IMPLIED TASKS</strong></td>
</tr>
<tr>
<td>1. MISSION (OR PROBLEM)</td>
</tr>
<tr>
<td>2. THE SITUATION AND COURSES OF ACTION</td>
</tr>
<tr>
<td>a. Considerations affecting possible courses of action.</td>
</tr>
<tr>
<td>b. Opposing conditions.</td>
</tr>
<tr>
<td>c. Own courses of action.</td>
</tr>
<tr>
<td>3. ANALYSIS OF OPPOSING COURSES OF ACTION (ANALYSIS OF FRIENDLY OPTIONS)</td>
</tr>
<tr>
<td>4. COMPARISON OF OWN COURSES OF ACTION</td>
</tr>
<tr>
<td>5. DECISION (OR RECOMMENDATIONS)</td>
</tr>
</tbody>
</table>

Figure 3-1. Format for the Estimate of the Situation.

c. The format and content of each element of the estimate of the situation is discussed below:

1. **MISSION (OR PROBLEM)**

This paragraph involves a statement of the task and its purpose. The task and purpose may be deduced by the estimator or prescribed by higher authority. In either case, the reduced or prescribed mission or problem normally does not reflect all tasks that must be performed. Therefore, the mission or problem is studied to determine what tasks must be performed to accomplish it, the sequence in which they are to be accomplished, and the conditions or circumstances under which you will be operating.

2. **SITUATION AND COURSES OF ACTION**

This paragraph consists of three major considerations which bear on how the mission will be accomplished as discussed below:

a. Considerations affecting possible courses of action. This involves determining and arranging in an orderly manner facts which have a bearing on the situation. In the absence of facts, logical assumptions are made. Only those facts and/or assumptions which contribute to or influence the ultimate choice of a course of action are appropriate for consideration.
b. Enemy capabilities. Determine and arrange in order of probability of occurrence opposing conditions which may adversely affect the accomplishment of the mission and which will assist in the ultimate choice of a course of action. These conditions should not be confused with facts established in 2a which may affect both "own courses of action" and "opposing conditions." These are conditions which can directly oppose and success of each course of action being considered. They provide a basis for the analysis of each of our "own courses of action" and a subsequent determination as to which course of action offers the greatest probability of success.

c. Own courses of action. Formulate courses of action which represent possible solutions to the accomplishment of the mission. Courses of action, although in general terms, are formulated in sufficient detail to distinguish one from the other and to provide a basis for a flexible analysis.

3. ANALYSIS OF OPPOSING COURSES OF ACTION (ANALYSIS OF FRIENDLY OPTIONS)

a. In this paragraph the estimator analyzes each of his own courses of action when opposed by the conditions established in 2b above. The purpose of this step is to determine the advantages and disadvantages of each of his own courses of action. A separate analysis is made for each of his own courses of action. If applicable, the opposing conditions may be combined to simplify and speed up the estimate process.

b. The technique is to determine the probable events that will occur during the execution of each own course of action, when faced with the opposing conditions, as it is visualized from its beginning to its completion. Keeping in mind the mission to be accomplished, determine the effects of the facts established in 2a above on the course of action being considered and on the opposing conditions established in 2b above. Thus, the advantages and disadvantages of each own course of action are determined.

4. COMPARISON OF OWN COURSES OF ACTION

Review and evaluate the advantages and disadvantages of each course of action, established above, to determine their significance. Compare courses of action in terms of the significant advantages and disadvantages. Decide which course of action promises to be most successful in accomplishing the mission. Usually the estimator will find that this determination is influenced by his evaluation of advantages or disadvantages which in his judgment are more significant than others.

5. DECISION (OR RECOMMENDATIONS)

Translate the course of action selected into a complete statement as to the action to be taken. It should include WHO, WHAT, WHEN, WHERE, HOW and WHY, as appropriate. The decision statement represents the minimum that must be decided to initiate the action necessary to accomplish the mission. It may represent the complete action required or it may serve only as a basis for further study and development of a more complete plan.

3-3. APPLICATION.

a. The basic estimate is used to solve command problems of major or minor significance. The application of the basic estimate will depend on the problem being solved.

b. At battalion level and higher, the commander is assisted in his study of the mission by his staff which provides information, conclusions, and recommendations as a result of their estimates. The staff estimates are designed to provide the commander with conclusions and recommendations with regard to a particular mission. Non-tactical or tactical in nature. When solving a problem within his own area of interest, the staff officer applies the basic estimate in its purest form.

c. The basic estimate shown in Figure 3-1 is the basis for all estimates. It is modified as necessary to solve any problem or mission at hand. It must be understood that the estimate is not a magic formula that guarantees a correct solution. Its use requires thoroughness and clarity, and the application of judgment and professional knowledge to the situation at hand to reach a sound decision.

d. At the Infantry School, instruction is concentrated on the application of the basic estimate to tactical situations. Sections II and III of this chapter discuss the application of the basic estimate by the tactical commander (Tactical Commander's estimate) and by the S3 (Operation Estimate). Personnel, Intelligence, and Logistic Estimates are discussed individually and in detail in ST 7-150-101-5 "Company Commander & Staff Officer Handbook."

Section II. TACTICAL COMMANDER'S ESTIMATE

3-4. GENERAL.

a. The tactical commanders estimate is a modified version of the basic estimate discussed in Section I. Its purpose is to assist the commander in arriving at the scheme of maneuver that can best accomplish the mission.

b. The tactical commander's estimate is as thorough as time and circumstances permit. The amount of detail varies with the level and type of command. Although the commander incorporates information, conclusions, and recommendations provided by his staff into his estimate, he alone is responsible for his estimate and decisions.

3-5. THE ESTIMATE PROCESS.

a. The commander begins (continues) his estimate upon deduction or receipt of a mission. He integrates the estimate process closely with his application of troop-leading procedures to ensure efficient use of time. At battalion and higher, he relies heavily on information, conclusions, and recommendations of his staff. Figure 3-2 graphically portrays the flow of reasoning in the tactical commander's or operation officer's estimate.

b. The tactical commander's estimate and the S3's operation estimate serve the same purpose. They explore all possibilities and assist the commander in determining the best scheme of maneuver. They differ only in form; the tactical commander's estimate ends in a decision, the operation estimate in a recommendation. Since the techniques of an operation estimate are discussed in Section III, the techniques of making the tactical commander's estimate will not be discussed in detail in this section.

3-2
Figure 32. Flow of information in the Tactical Commander's Estimate of Force

The estimate of force is a critical component of the Tactical Commander's planning process. It involves the assessment of the enemy's capabilities, potential courses of action, and the commander's strategy. The estimate is developed through a collaborative effort between the Tactical Commander and their staff, utilizing intelligence, surveillance, and reconnaissance (ISR) data and other relevant information.

The estimate process includes the following steps:

1. **Analysis of Intelligence Data**
   - Collection and analysis of intelligence data to understand the enemy's capabilities and intentions.
   - Consideration of environmental factors and their impact on the enemy's operations.

2. **Assessment of Enemy Capabilities**
   - Evaluation of the enemy's forces, equipment, and tactics.
   - Determination of enemy's strengths and weaknesses.

3. **Identification of Potential Courses of Action**
   - Identification of possible enemy responses to planned operations.
   - Evaluation of the feasibility and effectiveness of these courses of action.

4. **Formulation of Strategy**
   - Development of a tactical plan that addresses the enemy's potential responses.
   - Determination of the commander's objectives and desired outcomes.

5. **Execution**
   - Implementation of the plan with coordination and support from the staff and appropriate units.

The estimate of force is an iterative process, with updates and adjustments made as new information becomes available or as the situation on the ground changes.

Factors影响ing the estimate include:

- **Weather and Environmental Conditions**
- **Geographical Constraints**
- **Resource Availability**
- **Political and Social Factors**

The estimate is crucial for decision-making, resource allocation, and the overall success of military operations.
There is a mutual exchange of information between the commander and his staff during the estimating process. For example, the commander, in his planning guidance, may announce a particular course of action he wants the staff to consider; the S3 will provide other staff members the courses of action under consideration; the S2 provides information of the enemy to include capabilities and most probable enemy course of action; and the S1 and S4 provide information and conclusions as to whether the operation can be supported from their respective areas of interest. Although the operation estimate, in a tactical environment, is the key staff estimate, it is coordinated with all other members of the staff before presentation to the commander. By virtue of this coordination, the operation estimate becomes the coordinated staff recommendation. The commander, considering the staff recommendation, completes his estimate and announces his decision.

Section III. OPERATION ESTIMATE

3-7. GENERAL.

a. The purpose of the operation estimate is to arrive at a recommendation as to the best scheme of maneuver to accomplish the mission. When applicable, it includes nuclear rounds and targets that complement the scheme of maneuver.

b. The operation estimate also develops details of the tactical plan other than the scheme of maneuver. Although these details are pertinent and integrated into the tactical plan, the S3 should not allow them to obscure the principal issue of determining the best scheme of maneuver. Although they are developed to support or contribute to the scheme of maneuver, they are not expressed in the recommendation statement.

3-8. ESTIMATE PROCESS

a. The S3 plans continuously, based on his general knowledge of the situation and logically assumed missions. Before he can complete his estimate a more specific mission must be deduced by the commander or prescribed by higher authority. Then the S3 completes his estimate and determines a recommended scheme of maneuver.

b. The following is the technique and mental process of making an operation estimate:

1. MISSION. The mission is the restated mission determined by the commander in Step 3, Mission Analysis and Planning Guidance of the Sequence of Commander and Staff Action. The restated mission includes a listing, in sequence of accomplishment, of the specified and implied tasks as determined through mission analysis.

2. THE SITUATION AND COURSES OF ACTION. The S3 considers all features of the environment in which the mission must be accomplished.

   a. Considerations affecting the possible courses of action. The purpose of this subparagraph is to identify the pertinent facts of the situation. These concern the area of operation, enemy situation, and own situation that will influence enemy and own actions. In application, the S3 already knows many of these facts. However, if assigned a new mission he normally needs to review and update his knowledge of the situation, obtain additional information and revise his appreciation of the effect these facts may have on the mission. In the absence of facts, logical assumptions may be used. These facts are used in the study of the mission, development of possible courses of action, and any applied in the "analysis" (para 3) and "comparison" (para 4).

   b. The S3 understands the characteristics of the area of operation, the enemy and own situation, and enemy capabilities, the more sound his analysis will be:

      1. Characteristics of the area of operation. The S2 provides the S3 with his analysis of weather, terrain, and other aspects of the area of operation. The S3 considers the influence these characteristics have on enemy and friendly actions.

         a. Weather. Primary emphasis on visibility, trafficability, men and equipment.

         b. Terrain. The five military aspects of terrain: observation and fire, cover and concealment, obstacles, key terrain, and avenues of approach.

         c. Other characteristics. Any characteristics, other than weather and terrain, which influence enemy and friendly actions. e.g. sociological, political, psychological, and economic characteristics.

      2. Enemy situation. The S3 considers enemy dispositions, composition, strength, activities, and peculiarities and weaknesses. The S2 provides them to the S3. Since the S3 equates the enemy situation with his own to determine relative combat power, he should consider these from the viewpoint of planned operations.

      3. Own situation. Note own dispositions, strength, morale, and status of equipment, supplies, and training. The S3 considers these primarily from the viewpoint of own situation versus the enemy situation established above. He equates these facts to relative combat power.

      4. Relative combat power. Combat power is the integration of the tangible means (physical) with the intangible (superior generalship, etc.). Morale, esprit, and superior leadership increase the tangible combat power of a unit. Combat power is significant only in relation to the combat power of an opposing force. Therefore, the S3 considers the friendly and enemy situation to determine relative combat power for a specific operation. If the S3 determines that additional resources are needed to develop the required combat ratio, he recommends additional resources be requested.

b. Enemy capabilities.

   1. Enemy capabilities are broad courses of action which the enemy is physically capable of adopting and which will affect the accomplishment of the mission if adopted. The S3 considers enemy capabilities provided by the S2 and evaluates their possible influence on own courses of action. Following are examples of how enemy capabilities are applied.

   a. In formulating a course of action in an attack situation, the S3 considers enemy capabilities to defend or delay and to reinforce his defense. Although the enemy may possess the capabilities to attack and withdraw, they are not evaluated. If the enemy attacks prior to our attack, it would present the estimator with a new situation (defense) and require reconsideration of friendly courses of action. Any enemy attack capability employed during our attack is a counterattack inherent in the enemy defense capability. Should the enemy withdraw prior to or during our attack, no basis would be provided for choosing an attack course of action.

3-4
(b) In defense situations, the S3 considers enemy capabilities to attack and to reinforce his attack. Since enemy capabilities to defend delay or withdraw would provide no basis for choosing a defense course of action, these enemy capabilities are not normally considered.

(c) Enemy support capabilities such as nuclear, air, chemical, and biological are normally considered with enemy maneuver capabilities and will not be considered separately.

(2) The S3 now considers the capability of the enemy is most likely to adopt. The S2 provides the S3 with his conclusion of the enemy's most probable course of action. In the absence of evidence to the contrary, if his unit is to attack, the S3 may assume that the enemy will defend. If his unit is to defend, he may assume the enemy will attack (for analysis purposes).

(3) Vulnerabilities. Enemy weaknesses, such as an exposed flank which can be exploited, are always considered.

NOTE: The analysis above of weather, terrain, and the enemy is made by the S2 in the intelligence estimate. This does not preclude the commander and other staff officers of making an independent analysis of these factors. The analysis of the effects of weather, terrain, and enemy is accomplished through the application of methods and techniques contained in Intelligence Workbook.

c. Own courses of action.

(1) At this stage of the operation estimate, the S3 formulates courses of action. A course of action is a possible plan to an individual or a commander which could accomplish his mission. They are formulated in terms of WHAT (actions to be taken), WHEN (time the action will occur), WHERE (the location of the action), HOW (means to be employed), and WHY (purpose of the action).

(2) Courses of action can be formulated in broad or detailed. They may be terms. That is, there may be a variation in the elements of WHAT, WHEN, WHERE, HOW, and WHY included. As a general rule, it is best to initially formulate them in broad terms and add details during the analysis.

(3) There are many methods of expressing an offensive course of action.

(a) A simple way to state a course of action is to combine avenues of approach with subordinate maneuver units. For example:

"TF 2-78 attacks 240600 May 1978 with two company sized forces on AA1 and one company sized force on AA2 to secure OBJ 1."

(b) Another method of stating a course of action is in terms of formation of the attacking force. For example:

"Attack 010500 Jun in line formation with two companies abreast: one company in direction HILLS 410 (NA7065) - 450 (NA7070) - 480 (NA7073) to seize HILL 480; one company in direction HILLS 430 (NA8065) - 445 (NA8070) - 475 (NA8075) to seize HILL 475."

(4) In the defense the S3, considering terrain and avenues of approach leading into the sector, selects more specific traces for the FEBA along which the forward committed units can defend. Normally two or three such traces are sufficient. Using these, he develops courses of action expressing these more specific traces of the FEBA.

(a) The following are examples of defense courses of action expressed in terms of WHERE:

"Defend by 031800 Nov along (FEBA) west bank BLUE Creek from QL073271 to QL072243."

"Defend by 031600 Nov along (FEBA) QL073271 - QL073255 - QL072243."

(b) The following is an example of a defense course of action expressed in terms of HOW:

"Defend HILLTOWN (GL1864) employing three battalions from north to south along FEBA."

(c) The following is an example of a defense course of action expressed in terms of HOW and WHERE:

"Defend by 031800 Nov employing one company from AB073271 to AB078280 and one company on the right to AB082289, one company in reserve."

(5) The S3 provides other members of the staff with all courses of action under consideration so that they can complete their estimates and provide conclusions for the staff recommendation.

3. ANALYSIS OF OPPOSING COURSES OF ACTION. (ANALYSIS OF FRIENDLY OPTIONS)

a. The S3 analyzes each of his courses of action against enemy capabilities established in 2b above. Normally, at brigade and battalion, he combines enemy capabilities into a single statement to speed up and simplify the analysis process. However, if time permits, the S3 might analyze each course of action against each enemy capability separately.

b. The manner in which the analysis is made is a matter of personal choice. The S3 should keep the purpose of the analysis in mind throughout. The purpose is to determine the advantages and disadvantages and develop a general scheme of maneuver (the WHERE and HOW) for each own course of action. Keeping the mission in mind, he determines the significant effects of weather, terrain, enemy situation and friendly situation, and other pertinent factors on each course of action. While analyzing each of his courses of action, the S3 develops the need for employment of forces other than the main attack as described in his initial course of action. In doing so, he is further developing and refining the WHERE and HOW (developing the general scheme of maneuver) that would apply if the course of action under consideration were adopted. He concurrently applies the principles of war and considers appropriate tactical fundamentals, methods, and techniques as he "war games" each course of action from start to finish. Each major subordinate unit has then received its primary mission.
c. The S3 must keep in mind that the primary purpose of the operation estimate is to arrive at a RECOMMENDATION concerning the best scheme of maneuver to accomplish the mission. Therefore, during the analysis he considers primarily on determining the advantages and disadvantages of each of his own courses of action and the development general scheme of maneuver for each. During the course of the analysis, matters which may not directly pertain to a general scheme of maneuver come to his attention. These matters may include the need for supporting fires at particular locations; the requirements for engineers to clear a minefield, span a water obstacle or toemplace an obstacle; vulnera of a flank to enemy attack; the need for antitank protection; lack of important intelligence; and like items. The S3 notes matters for subsequent completion of the detailed tactical plan. Although these matters are important, the S3 does not them to cloud the principal issue or to preclude his timely completion of the operation estimate and presentation of the recommendation. These matters can be worked out later.

d. The above process is repeated for each friendly course of action. No attempt should be made at this time to con each of them.

NOTE: During the analysis, the S3 may introduce a new course of action, make a major change in one being considered, or eliminate one from further consideration.

4. COMPARISON OF OWN COURSES OF ACTION.

a. In comparing own courses of action, the S3 first reviews and evaluates the advantages and disadvantages that determined during his analysis. Some advantages and disadvantages may be so insignificantly as to be ignored. The S3 determines the significance of each advantage and disadvantage before allowing them to influence his conclusion. He considers that the significance and weight of each of the advantages and disadvantages rarely will be the same, and that one or more advantages or disadvantages may become overriding considerations. Therefore, any judgment made by the S3 depends upon his appreciation of the degree to which the advantages or disadvantages increase or decrease opportunities for success or may improve the degree of success he might attain.

b. The S3 now compares the courses of action in terms of the general scheme of maneuver for each. He re-elects his conclusion as to the general scheme of maneuver offering the greatest probability of success. He may conclude that the course of action is a combination of two or more under consideration and may state the revised course of action as a recommendation. The S3 brings to bear all of his knowledge of tactics, judgment, skill, and experience in making this comparison.

5. RECOMMENDATION.

a. The recommendation is a statement of the general scheme of maneuver to be adopted and, if applicable, any units rounded to be fired, scheduled, or on call and their targets to complement the scheme of maneuver. It normally will not in designating specific units to be employed. The S3 considers the conclusions of other staff estimates and when presented commander, the recommendation represents a coordinated staff position.

b. Examples of recommendations:

1. Attack. To complete the general scheme of maneuver, he indicates use of the reserve. Additionally, he adc a nuclear round and its target.

"Bn attacks 230715 Oct with one company/team attacking in the direction of HILL 930 (AM2312) - BRESLAV (AM2312). Hill 1050 (AM2413) to seize HILL 1050 and one company/team attacking in the direction of HILLS 821 (AM2411) (AM2412) - 819 (AM2412) to seize HILL 819. One company/team in reserve, follows; on order, continue the attack to HILL 917 (AM2413). One MRC/1K7 round employed on HILL 1045 (AM24140) at 230503:"

2. Defense. The recommendation reflects the general area to be defended by each forward unit as illustrated in example.

"Bn defends by 031800 Oct along FEBA west bank BLUE Creek from QL073271 to QL072243 employing company/team on the north to vicinity QL07521 and one company/team on the south. One company/team in reserve occupying blocking position on HILL 238 (QL0625):"

3-3. COMMANDER'S DECISION AND CONCEPT TO HIS STAFF.

a. As outlined in para 12, Sequence of Actions in Making and Executing Decisions, the commander considers the recommendation presented by the S3, completes his estimate, and announces his decision. It takes the same general format as the staff recommendation except that it includes the elements of WHO and so much of the WHY as are necessary. Many decisions are made by the commander in the course of planning an operation. However, the decision made as a result of his estimate is considered the minimum essential information to further develop the tactical plan. This is the DECISION reflected in the last step of the tactical commander's estimate. It will be used by the staff to develop balance of the tactical plan. Examples of decision statements are indicated below.

NOTE: Designation of units to be employed is a command responsibility that cannot be delegated. Although units are recommended by the S3, the commander will always make as positive confirmation by stating the units employed in his decision statement and may further elaborate in his concept.

(1) Attack.

3-5
"Battalion attacks 230715 Oct. Co A attacks in the direction HILL 930-BRESLAU - HILL 1050, to seize HILL 1050. and C attacks in the direction HILLS 821748 - 819, to seize HILL 819; Co B, in reserve, follows Co A; on order, continue the attack and seize HILL 1071. One MRCI KT round employed on HILL 1045 (AM240140) at 120705."

(2) Defense.
   "Bn defends by 031800 Oct along (FEBA) west bank BLUE Creek from QL073271 to QL072243 employing Co A on the no to QL074251 and Co C on the south; Co B, in reserve, occupies battle position on HILL 536." b. Following his decision, the commander provides the staff with his concept: how the operation will be conducted. I an elaboration of his decision in which he explains any aspects deemed necessary. In addition, he provides guidance ~ instructions to his staff that facilitates their completion of planning and preparation of orders. This may include elaboration of the scheme of maneuver, plan of fire support, and combat service support. Of specific concern is the gene plan of fire support to support the plan of attack.
   (1) The commander's attack decision in the example above could be amplified by his concept as follows:
      "The battalion will attack dismounted to overcome the initial enemy resistance, with attacking companies clearing the zones. However, after seizure of HILL 1050, I visualize the attack can be mounted on one axis to seize HILL 1071. Cross attack platoons of the attached tank company with the two attacking companies. I want close contact maintained with the battalion on our south flank. A 5-minute preparation will be fired beginning at H-5. In addition to the 1 KT round to be fired on H1 1045, on call nuclear fires will be employed under brigade control. Plan one MRC/2 KT round on HILL 1071. Priority of fire Co A. Are there any questions? Very well, complete the plan. I will issue the operation order orally at the battalion OP at 1 (Make sufficient overloads to issue one to each company commander.)"

(2) The commander's defense decision in the example above could be amplified as illustrated below:
      "Attach one AT Section to Cc C. Plan one MRCI KT round to be employed on HILL 821 (AM2411), on call. One Howitzer FPY is allocated to Co C and the 4.2 in mortar FPY to Co, with priority of fires to Co.C. In counterattack planning; give priority to a penetration in the sector of Co C. Are there any questions" Very well, complete the plan and prepare written operation order for my signature by 1000. I will issue it at the battalion CP."

C. The commander's decision statement, together with his concept, provides the necessary elements of paragraph Concept of Operation, of the operation order.