

Chapter 5

The Military Decision-Making Process

Decision making is knowing *if* to decide, then *when* and *what* to decide. It includes understanding the consequence of decisions. Decisions are the means by which the commander translates his vision of the end state into action.

Decision making is both science and art. Many aspects of military operations—movement rates, fuel consumption, weapons effects—are quantifiable and, therefore, part of the *science* of war. Other aspects—the impact of leadership, complexity of operations, and uncertainty regarding enemy intentions—belong to the *art* of war.

The military decision-making process (MDMP) is a single, established, and proven analytical process. (See [Figure 5-1, page 5-2.](#)) The MDMP is an adaptation of the Army's analytical approach to problem solving. The MDMP is a tool that assists the commander and staff in developing estimates and a plan. While the formal problem-solving process described in this chapter may start with the receipt of a mission, and has as its goal the production of an order, the analytical aspects of the MDMP continue at all levels during operations.

The MDMP helps the commander and his staff examine a battlefield situation and reach logical decisions. The process helps them apply thoroughness, clarity, sound judgment, logic, and professional knowledge to reach a decision. The full MDMP is a detailed, deliberate, sequential, and time-consuming process used when adequate planning time and sufficient staff support are available to thoroughly examine numerous friendly and enemy courses of action (COAs). This typically occurs when developing the commander's estimate and operation plans (OPLANs), when planning for an entirely new mission, during extended operations, and during staff training designed specifically to teach the MDMP.

The MDMP is the foundation on which planning in a time-constrained environment is based. The products created during the full MDMP can and should be used during subsequent planning sessions when time may not be available for a thorough relook, but where existing METT-T factors have not changed substantially. (See [page 5-27](#) for a discussion of decision making in a time-constrained environment.)

The MDMP relies on doctrine, especially the terms and symbols (graphics) found in [FM 101-5-1](#). The use of approved terms and symbols facilitates the rapid and consistent assessment of the situation and creation and implementation of plans and orders by minimizing confusion over the meanings of terms and symbols used in the process.

The *advantages* of using the complete MDMP instead of abbreviating the process are that—

- It analyzes and compares multiple friendly and enemy COAs in an attempt to identify the best possible friendly COA.
- It produces the greatest integration, coordination, and synchronization for an operation and minimizes the risk of overlooking a critical aspect of the operation.
- It results in a detailed operation order or operation plan.

The *disadvantage* of using the complete MDMP is that it is a time-consuming process.

ROLES OF THE COMMANDER AND STAFF

The commander is in charge of the military decision-making process and decides what procedures to use in each situation. The planning process hinges on a clear articulation of his battlefield visualization. He is personally responsible for planning, preparing for, and executing operations. From start to finish, the commander's personal role is central: his participation in the process provides focus and guidance to the staff. However, there are responsibilities and decisions that are the commander's alone ([Figure 5-1](#)). The amount of his direct involvement is driven by the time available, his personal preferences, and the experience and accessibility of the staff. The less time available, the less experienced the staff, and the less accessible the staff, generally the greater the commander involvement. Examples for discussion of increased commander involvement are found in [Decision Making in a Time-Constrained Environment, page 5-27](#).

The commander uses the entire staff during the MDMP to explore the full range of probable and likely

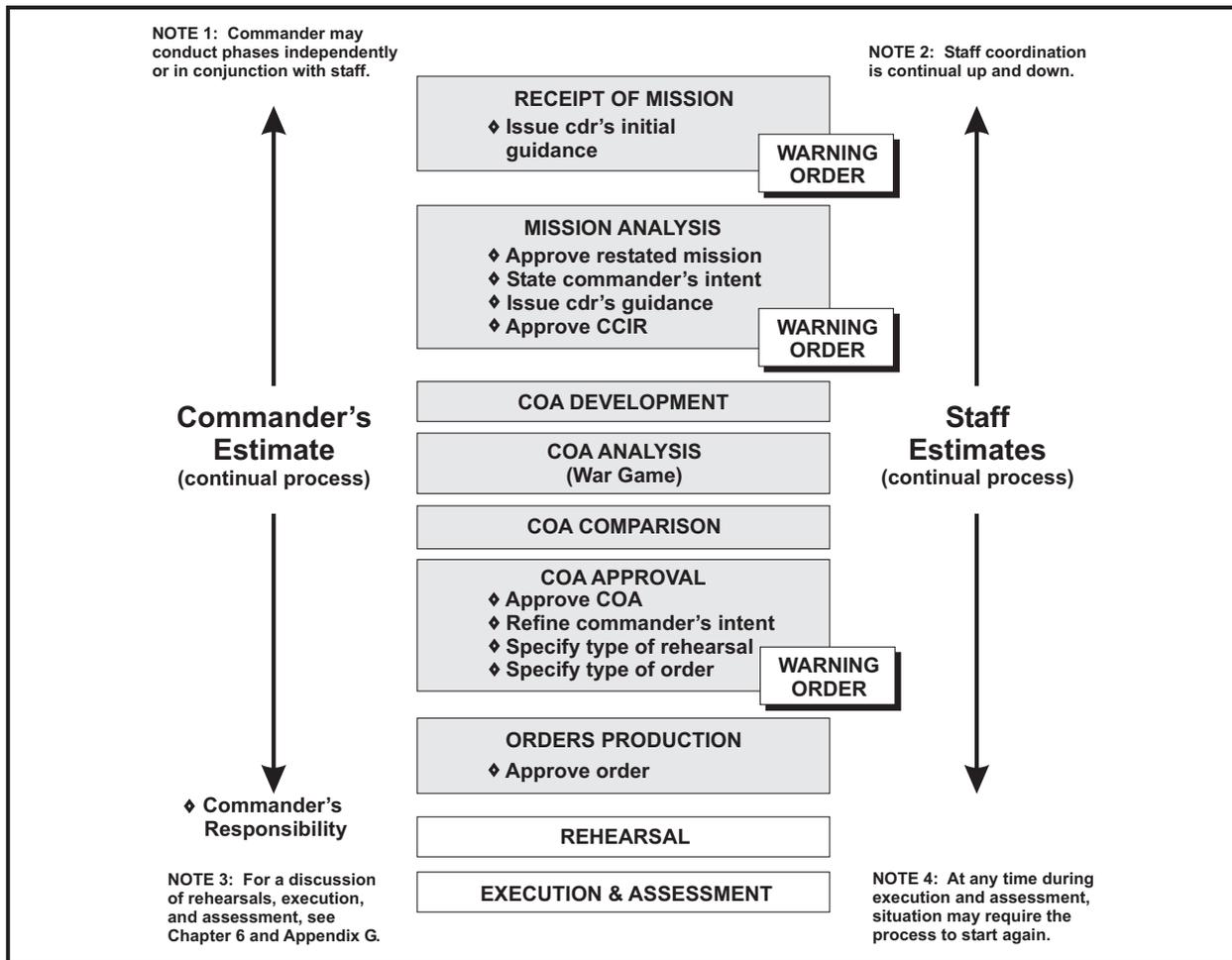


Figure 5-1. The military decision-making process

enemy and friendly COAs, and to analyze and compare his own organization's capabilities with the enemy's. This staff effort has one objective—to collectively integrate information with sound doctrine and technical competence to assist the commander in his decisions, leading ultimately to effective plans.

The CofS (XO) manages, coordinates, and disciplines the staff's work and provides quality control. He must understand the commander's guidance because he supervises the entire process. He ensures the staff has the information, guidance, and facilities it needs. He provides time lines to the staff, establishes briefback times and locations, and provides any unique instructions.

By issuing guidance and participating in formal and informal briefings, the commander and CofS (XO)

guide the staff through the decision-making process. Such interaction helps the staff resolve questions and involves the entire staff in the total process. The selected course of action and its implementing operation order are directly linked to how well both the commander and staff accomplish each phase of the MDMP.

THE ROLE OF RECONNAISSANCE DURING THE PLANNING PROCESS

The commander and staff deploy reconnaissance assets early in the planning process to facilitate early collection. However, reconnaissance assets should not be launched without using, as a minimum, the reconnaissance planning factors found in step 9 of mission analysis (page 5-8). The

commander and staff analyze the information collected and incorporate it into the planning process. They ensure reconnaissance is continuous during the planning of, preparation for, and execution of, the mission. Information collected during reconnaissance may result in initial plans or COAs having to be modified or even discarded. The earlier the need for modifications can be identified, the easier they can be incorporated and synchronized into the plan. Further, when the plan changes, the commander must modify his reconnaissance objective to support the new plan.

An effective leader's or staff reconnaissance can assist significantly in developing COAs. Conducted early in the planning process, it can help confirm or deny the commander's and staff's initial assessments. It may also allow them to immediately focus on a specific COA, or eliminate COAs that the reconnaissance shows to be infeasible. This reconnaissance may be a map reconnaissance or a physical reconnaissance of the terrain.

When conducting a reconnaissance with the staff, the commander must determine if the benefits outweigh the risks. During defensive operations, the reconnaissance can be conducted with little risk. During offensive operations, personal reconnaissance involves more risk and may not be practical. Then the commander and staff may have to rely on the command's reconnaissance assets.

THE MILITARY DECISION-MAKING PROCESS MODEL

The military decision-making process has seven steps (Figure 5-2). Each step of the process begins with certain input that builds upon the previous steps. Each step, in turn, has its own output that drives subsequent

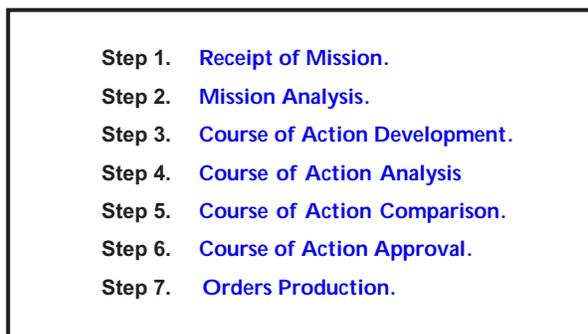


Figure 5-2. The steps in the MDMP

steps. (See Figure 5-3, page 5-4.) Errors committed early in the process will impact on later steps.

Estimates go on continuously to provide important inputs for the MDMP. The commander and each staff section do estimates. (See Appendix C.) Estimates are revised when important new information is received or when the situation changes significantly. They are conducted not only to support the planning process but also during mission execution.

Receipt of Mission

NOTE: References to higher headquarters in this chapter mean the headquarters one echelon up, unless the reference specifically states two echelons up.

The decision-making process begins with the receipt or anticipation of a new mission. This can either come from an order issued by higher headquarters, or derive from an ongoing operation. For example, the commander determines that he has the opportunity to accomplish his higher commander's intent significantly different from the original course of action because of a change in enemy disposition. This may cause him to plan for a significantly different course of action.

As soon as a new mission is received, the unit's operations section issues a warning order to the staff alerting them of the pending planning process. Unit SOPs identify who is to attend, who the alternates are, and where they should assemble. Providing supporting and attached units copies of the unit SOP ensures they will understand what is expected of them during the process.

The staff prepares for the mission analysis immediately on receipt of a warning order by gathering the tools needed to do mission analysis. These include—

- Higher headquarters' order or plan, with graphics. (When possible, each staff officer receives a copy of the order or plan to assist in fully understanding mission requirements.)
- Maps of the area of operations.
- Both own and higher headquarters' SOPs.
- Appropriate FMs (especially FM 101-5-1).
- Any existing staff estimates.

Staff officers should develop a generic list of requirements for particular types of missions to help them prepare for the mission analysis process. See Appendix A for examples.

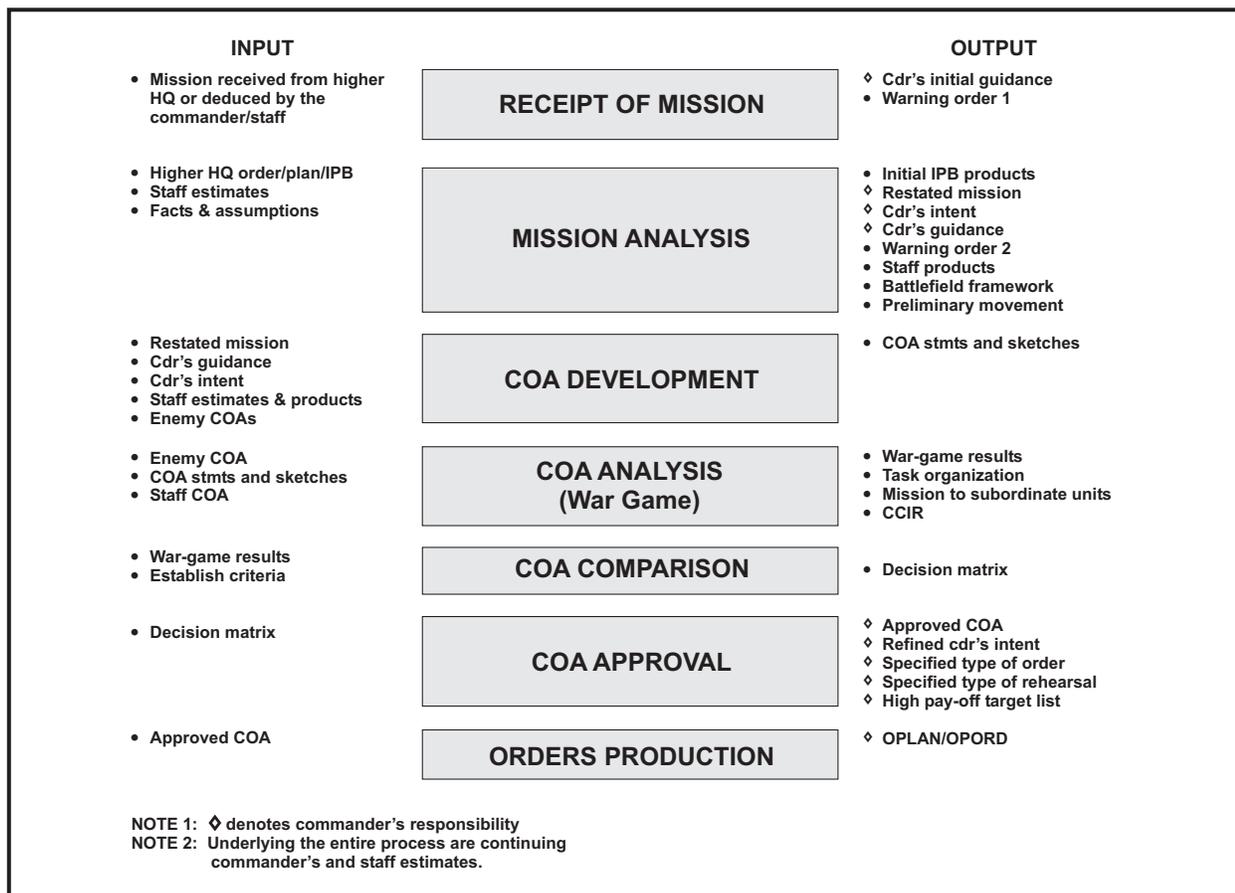


Figure 5-3. Staff inputs and outputs

Staff officers must constantly update their staff estimates and other critical information. This information allows them to develop assumptions that are necessary to the planning process. Staff officers must be aggressive in obtaining this information.

Reporting of this information must be a push system versus a pull system. Subordinate units must rapidly update their reports as the situation changes. Good reporting SOPs must be developed, practiced, and enforced.

Once the new mission is received, the commander and the staff must do a quick initial assessment. It is designed to optimize the commander's use of time while preserving time for subordinate commanders to plan and complete combat preparations. This assessment—

- Determines the time available from mission receipt to mission execution.

- Determines the time needed to plan, prepare for, and execute the mission for own and subordinate units.

- Determines the intelligence preparation of the battlefield (IPB).

- Determines the staff estimates already available to assist planning.

Additional factors to consider are—

- Ambient light requirements for planning, rehearsals, and movement.

- The staff's experience, cohesiveness, and level of rest or stress.

The critical product of this assessment is an initial allocation of available time. The commander and the staff must balance the desire for detailed planning against the need for immediate action. The commander must provide guidance to subordinate units as early as possible to

allow subordinates the maximum time for their own planning and preparation for operations. This, in turn, requires aggressive coordination, deconfliction, integration, and assessment of plans at all levels, both vertically and horizontally.

As a general rule, the commander allocates a minimum of two-thirds of available time for subordinate units to conduct their planning and preparation. This leaves one-third of the time for the commander and his staff to do their *planning*. They use the other two-thirds for their own preparation.

Time, more than any other factor, determines the detail with which the staff can plan. Once time allocation is made, the commander must determine whether or not to do the full MDMP, or to abbreviate the process.

The commander then issues his initial guidance (not to be confused with commander's guidance, Step 15, mission analysis). Although brief, it includes—

- [How to abbreviate the MDMP, if required \(page 5-27\).](#)

- Initial time allocation.
- Liaison officers to dispatch.
- Initial reconnaissance to begin.
- Authorized movement.
- Additional tasks the commander wants the staff to accomplish.

The last step in the mission receipt phase is to issue a warning order to subordinate and supporting units. This order must include as a minimum the type of operation, the general location of the operation, the initial time line, and any movement or reconnaissance to initiate. (See [Figure H-6, page H-27.](#)) Warning orders facilitate parallel planning. Parallel planning means that several echelons will be working on their MDMP concurrently. This is essential to speed up the process for subordinate units and allow subordinates the maximum time to conduct their own planning. Parallel planning relies on accurate and timely warning orders and a full sharing of information between echelons as it becomes available. Parallel planning is a routine procedure for the MDMP.

Mission Analysis

Mission analysis is crucial to the MDMP. It allows the commander to begin his battlefield visualization. The result of mission analysis is defining the tactical problem and beginning the process of determining

feasible solutions. It consists of 17 steps, not necessarily sequential, and results in the staff formally briefing the commander. (See [Figure 5-4.](#)) In addition to the staff's mission analysis, the commander conducts his own mission analysis so that he has a frame of reference to assess the staff's work. During mission analysis, estimates continue. Anticipation, prior preparation, and a trained staff are the keys to a timely mission analysis.

Step 1. Analyze the Higher Headquarters' Order

The commander and his staff thoroughly analyze the higher headquarters' order to establish horizontal and vertical nesting, not just for maneuver, but also for all combat support and combat service support. This step is to ensure they completely understand—

- The higher headquarters'—
 - Commander's intent.
 - Mission, including tasks, constraints, risk, available assets, and area of operations.
 - Concept of the operation, including the deception plan.

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|----------|---|
| Step 1. | Analyze the higher headquarters' order. |
| Step 2. | Conduct initial intelligence preparation of the battlefield (IPB). |
| Step 3. | Determine specified, implied, and essential tasks. |
| Step 4. | Review available assets. |
| Step 5. | Determine constraints. |
| Step 6. | Identify critical facts and assumptions. |
| Step 7. | Conduct risk assessment. |
| Step 8. | Determine initial commander's critical information requirements (CCIR). |
| Step 9. | Determine the initial reconnaissance annex. |
| Step 10. | Plan use of available time. |
| Step 11. | Write the restated mission. |
| Step 12. | Conduct a mission analysis briefing |
| Step 13. | Approve the restated mission. |
| Step 14. | Develop the initial commander's intent. |
| Step 15. | Issue the commander's guidance. |
| Step 16. | Issue a warning order. |
| Step 17. | Review facts and assumptions. |

Figure 5-4. The steps in the mission analysis

— Time line for mission execution.

- The missions of adjacent (to include front and rear) units and their relation to higher headquarters' plan.
- The assigned area of operations.

Staffs periodically misinterpret the higher headquarters' mission, intent, and guidance, resulting in wasted time. If confused by the higher headquarters' order or guidance, the staff must seek *clarification immediately*. Liaison officers (LNOs) who are familiar with the higher headquarters' plan can assist by attending and participating in the planning process.

Step 2. Conduct Initial Intelligence Preparation of the Battlefield (IPB)

The IPB is a systematic, continuous process of analyzing the threat and the effects of the environment on the unit. It identifies facts and assumptions that determine likely threat COAs. The IPB supports the commander and staff and is essential to estimates and decision making. It provides the basis for intelligence collection and synchronization to support COA development and analysis. It is a dynamic staff process, driven by the commander, that continually integrates new information into the process.

To facilitate parallel planning, the G2 (S2) of the higher headquarters must provide all intelligence products to subordinate units as soon as they are usable, even if only partially complete. The higher headquarters G2 (S2) should have most intelligence products near completion prior to the orders briefing.

The G2 (S2) should not wait until after the orders briefing to release these products. If parallel planning is to occur, and the planning process is to be IPB-driven, this is the only way it can be conducted in a timely fashion. Again, an experienced LNO can contribute significantly by providing warning orders to the unit and passing all intelligence products as soon as they become available.

The IPB is the commander's and each staff officer's responsibility; the G2 (S2) does not do the entire IPB himself. Staff officers must assist the G2 (S2) in developing the situation template (SITTEMP) within their own areas of expertise.

The intelligence preparation of the battlefield—

- Defines the battlefield or operational environment in order to identify the characteristics of the environment that influence friendly and threat operations, to

help determine the area of interest (AI), and to identify gaps in current intelligence.

- Describes the battlefield's effects, including the evaluation of all aspects of the environment with which both sides must contend, to include terrain and weather and any infrastructure and demographics in the area of operations.

- Evaluates the threat by analyzing current intelligence to determine how the threat normally organizes for combat and conducts operations under similar circumstances. This step results in a doctrinal template that depicts how the threat operates when unconstrained by the effects of the environment.

- Using the results of the previous steps, and the effects of the specific environment in which the enemy currently operates, determines the threat's possible COAs and arranges them in probable order of adoption. They are expressed as SITTEMPS, which include all combat multipliers the enemy will use. SITTEMPS must be done prior to the mission analysis briefing; they are used to brief the commander on likely enemy COAs. The G2 (S2) develops and war-games these threat COAs during COA analysis.

The G2 (S2), with staff assistance, continues the IPB, developing event templates from SITTEMPS. The event template is not required for the mission analysis briefing. However, it should be done prior to the staff's COA development as it will help them identify where specific enemy activities may occur.

The results of the initial IPB are the modified combined obstacle overlay and enemy SITTEMPS. Once completed, the products of the IPB are updated and used throughout the operation. The initial IPB should also result in an initial intelligence-collection plan and may result in the launching of available reconnaissance assets to help fill in gaps in the intelligence picture. (However, this follows the process in Step 9 of mission analysis.)

NOTE: See FM 34-130 for detailed information on IPB.

Step 3. Determine Specified, Implied, and Essential Tasks

Specified tasks are those specifically assigned to a unit by its higher headquarters. Paragraphs 2 and 3 of the higher headquarters' order or plan state specified tasks. Specified tasks are also found in annexes and overlays. CS and CSS units may find them in paragraphs 4 and 5 also.

Implied tasks are those that must be performed to accomplish a specified task, but which are not stated in the higher headquarters' order. Implied tasks are derived from a detailed analysis of the higher headquarters' order, the enemy situation and courses of action, and the terrain. Analysis of the unit's current location in relation to its future area of operations provides insights into implied tasks that may be required to perform specified tasks. Additionally, an analysis of the doctrinal requirements for each specified task may provide implied tasks. Only those implied tasks that require allocation of resources should be retained.

Once staff officers have a list of specified and implied tasks, they ensure they understand each task's specific requirements. After analyzing specified and implied tasks, they present to the commander for his approval a tentative list of tasks that *must* be executed to accomplish the mission. These tasks are the *essential tasks*.

Step 4. Review Available Assets

The commander and staff examine additions to and deletions from the current task organization, support relationships, and status (current capabilities and limitations) of all units. They consider the relationship between specified and implied tasks and available assets. From this they determine if they have the assets to perform all specified and implied tasks. If there are shortages, they identify additional resources needed for mission success. The staff needs to pay particular attention to deviations from what the commander considers his normal task organization.

Step 5. Determine Constraints

A higher commander normally places some constraints on his subordinate commanders that restrict their freedom of action. Constraints can take the form of a requirement to do something (for example, maintain a reserve of one company) or a prohibition on action (for example, no reconnaissance forward of a line before H-hour). The commander and his staff must identify and understand these constraints. They are normally found in the scheme of maneuver, the concept of operations, and coordinating instructions.

Step 6. Identify Critical Facts and Assumptions

The staff gathers two categories of information concerning assigned task—facts and assumptions. Facts are statements of known data concerning the situation,

including enemy and friendly dispositions, available troops, unit strengths, and material readiness.

Assumptions are suppositions about the current or future situation that are assumed to be true in the absence of facts. They take the place of necessary, but unavailable, facts and fill the gaps in what the commander and staff know about a situation. An assumption is appropriate if it meets the tests of validity and necessity. Validity means the assumption is likely to be true. "Assuming away" potential problems, such as weather or likely enemy options, would result in an invalid assumption. Necessity is whether or not the assumption is essential for planning. If planning can continue without the assumption, it is not necessary and should be discarded. When possible, assumptions are cleared with the higher headquarters to ensure they are consistent with higher headquarters' plan. Assumptions are replaced with facts as soon as possible.

To determine assumptions, planners should—

- List all appropriate assumptions received from higher headquarters.
- State expected conditions over which the commander has no control but which are relevant to the plan.
- List conditions that would invalidate the plan or its concept of operations.

Step 7. Conduct Risk Assessment

The commander and staff identify accident risk hazards and make an initial assessment of the risk level for each hazard. The commander also makes an initial assessment of where he might take tactical risk. (See [Appendix J](#).)

Step 8. Determine Initial Commander's Critical Information Requirements (CCIR)

The CCIR identify information needed by the commander to support his battlefield visualization and to make critical decisions, especially to determine or validate courses of action. They help the commander filter information available to him by defining what is important to mission accomplishment. They also help focus the efforts of his subordinates and staff, assist in the allocation of resources, and assist staff officers in making recommendations. The CCIR should be limited to 10 or less to enhance comprehension. The CCIR directly affect the success or failure of the mission and they are time-sensitive in that they drive decisions at decision points. The key question is, "What does the commander

need to know in a specific situation to make a particular decision in a timely manner?”

The commander alone decides what information is critical, based on his experience, the mission, the higher commander’s intent, and input from the staff. The staff nominates information requirements (IR) to become CCIR. CCIR are situation-dependent and specified by the commander for each operation. He must continuously review the CCIR during the planning process and adjust them as situations change. During the MDMP, CCIR most often arise from the IPB and war gaming.

The CCIR are normally expressed as priority intelligence requirements (PIR)—information about the enemy; essential elements of friendly information (EEFI)—information needed to protect friendly forces from the enemy’s information-gathering systems; and friendly forces information requirements (FFIR)—information about the capabilities of his or adjacent units.

Step 9. Determine the Initial Reconnaissance Annex

Based on the initial IPB and CCIR, the staff, primarily the G2 (S2), identifies gaps in the intelligence available and determines an initial reconnaissance and surveillance plan to acquire information based on available reconnaissance assets. The G3 (S3) turns this into an initial reconnaissance annex to launch reconnaissance assets as soon as possible to begin their collection effort. This initial reconnaissance annex should contain, as a minimum:

- The area of operations for reconnaissance.
- Mission statement.
- Task organization.
- Reconnaissance objective.
- PIR and IR.
- Line of departure (LD)/line of contact (LC) time.
- Initial named areas of interest (NAIs).
- Routes to AO and passage of lines instructions.
- Communications and logistics support.
- Fire support measures.
- Medical evacuation.

This annex sets reconnaissance in motion. As more information becomes available, it is incorporated into a complete reconnaissance annex to the operation order (OPORD). (See [Figure H-22](#), [page H-60](#).) As these

assets collect information, and other intelligence sources fill in gaps, the taskings to reconnaissance assets must be updated to reflect new CCIR.

Step 10. Plan Use of Available Time

The commander and his staff refine their initial plan for the use of available time. They compare the time needed to accomplish essential tasks to the higher headquarters’ time line to ensure mission accomplishment is possible in the allotted time. They also compare the time line to the enemy time line developed during the IPB. From this they determine windows of opportunity for exploitation or times when the unit will be at risk from enemy activity.

The commander and staff specify when and where they will conduct the briefings that result from the planning process and when, where, and in what form they will conduct rehearsals. The commander can maximize available planning time for his own and subordinate units by sending additional warning orders as detailed planning develops. This allows parallel planning by subordinate units. The commander also uses LNOs to stay abreast of changes at higher headquarters.

Step 11. Write the Restated Mission

The CofS (XO) or G3 (S3) prepares a restated mission for the unit based on the mission analysis. The restated mission must contain all elements of a mission statement:

- Who (what types of forces) will execute the action?
- What type of action (for example, attack, defend) is contemplated?
- When will the action begin?
- Where will the action occur (area of operations and objectives)?
- Why (for what purpose) will each force conduct its part of the operation?

The element of what states the essential tasks. The restated mission will include on-order missions; be-prepared missions will be in the concept of operations.

Step 12. Conduct a Mission Analysis Briefing

Time permitting, the staff briefs the commander on its mission analysis using the following outline:

- Mission and commander's intent of the headquarters two levels up.
- Mission, commander's intent, concept of the operation, and deception plan or objective of the headquarters one level up.
- Review of commander's initial guidance.
- Initial IPB products.
- Specified, implied, and essential tasks.
- Constraints on the operation.
- Forces available.
- Hazards and their risk.
- Recommended initial CCIR.
- Recommended time lines.
- Recommended restated mission.

The mission analysis briefing should not be a unit readiness briefing. Staff officers must know the status of subordinate and supporting units and brief relevant information as it applies to the situation. The staff should develop standardized charts to monitor and consolidate this type of data to assist the commander in obtaining a quick snapshot of his unit.

The mission analysis briefing is given to both the commander and the staff. This is often the only time the entire staff is present, and the only opportunity to ensure that all staff members are starting from a common reference point. Mission analysis is critical to ensure thorough understanding of the task and subsequent planning.

The briefing focuses on relevant conclusions reached as a result of the mission analysis. This helps the commander and staff develop a shared vision of the requirements for the upcoming operation.

Step 13. Approve the Restated Mission

Immediately after the mission analysis briefing, the commander approves a restated mission. This can be the staff's recommended restated mission, a modified version of the staff's recommendation, or one that the commander has developed himself. Once approved, the restated mission becomes the unit's mission.

Step 14. Develop the Initial Commander's Intent

During the mission analysis, the commander develops his initial intent for the operation. After reviewing the mission analysis briefing and the restated mission, he modifies his intent statement if necessary.

The commander's intent is a clear, concise statement of what the force must do to succeed with respect to the enemy and the terrain and to the desired end state. It provides the link between the mission and the concept of operations by stating the key tasks that, along with the mission, are the basis for subordinates to exercise initiative when unanticipated opportunities arise or when the original concept of operations no longer applies. If the commander wishes to explain a broader purpose beyond that of the mission statement, he may do so. Intent is normally expressed in four or five sentences and is mandatory for all orders. The mission and the commander's intent must be understood two echelons down.

Key tasks are those that must be performed by the force, or conditions that must be met, to achieve the stated purpose of the operation (paragraph 2 of the OPORD or OPLAN). Key tasks are not tied to a specific course of action, rather they identify that which is fundamental to the force's success. In changed circumstances, when significant opportunities present themselves or the course of action no longer applies, subordinates use these tasks to keep their efforts supporting the commander's intent. The operations's tempo, duration, and effect on the enemy, and terrain that must be controlled, are examples of key tasks.

The commander's intent does not include the "method" by which the force will get from its current state to the end state. The method is the concept of operations. Nor does the intent contain "acceptable risk." Risk is stated in the commander's guidance and is addressed in all courses of action. If purpose is addressed in the intent statement, it does not restate the "why" (purpose) of the mission statement. Rather, it is a broader purpose that looks beyond the why of the immediate operation to the broader operational context of the mission.

The commander personally prepares his intent statement. When possible he delivers it, along with the order, personally. Face-to-face delivery ensures mutual understanding of what the issuing commander wants by allowing immediate clarification of specific points.

Commanders from company level up prepare an intent statement for each OPORD or OPLAN. The intent statement at any level must support the intent of the next higher commander. For any OPORD or OPLAN, there is only one commander's intent—that of the commander. Annexes (and their subordinate appendixes, tabs, and enclosures) to the OPORD or OPLAN do not contain an intent statement; they contain a concept of support. For

example, the Fire Support Annex to an OPORD will contain a concept of support, but not an intent statement. However, the OPORD issued to an artillery battalion supporting a maneuver brigade contains the intent statement of the artillery battalion commander.

The intent statement in an OPORD or OPLAN is after the heading for paragraph 3, Operations, and before paragraph 3a, Concept of Operations. The intent statements of the next two higher echelon commanders are contained in paragraph 1b of the OPORD or OPLAN to ensure that the staff and supporting commanders understand the intent two echelons up. At battalion level and higher, the order, containing the intent, is also written. This decreases the chances of misunderstanding.

Step 15. Issue the Commander's Guidance

After the commander approves the restated mission and states his intent, he provides the staff with enough additional guidance (preliminary decisions) to focus staff activities in planning the operation. This guidance is essential for timely COA development and analysis. By stating the planning options he does or does not want them to consider, he can save staff members time and effort by allowing them to concentrate on developing COAs that meet the commander's intent. The commander's guidance may be written or oral.

The commander's guidance must focus on the essential tasks supporting mission accomplishment. The guidance emphasizes in broad terms when, where, and how he intends to mass his combat power to accomplish the mission according to his higher commander's intent. Commander's guidance should include priorities for all combat, CS, and CSS elements and how he envisions their support of his concept. The amount of detail in the guidance depends on the time available, the staff's level of proficiency, and the flexibility the next higher commander provides. Guidance that is broad and general in nature provides the staff maximum latitude, allowing a proficient staff to develop flexible and effective options. As time becomes more constrained, the commander's guidance must become more specific and directive. The more detailed the guidance, the more quickly the staff can complete the plan. However, this increases the risk of overlooking or insufficiently examining things that might affect mission execution. [See Appendix B](#) for information that can be included in detailed guidance.

If, during the estimate process, the commander has identified one or more decisive points, or an action he considers decisive, he should convey this to the staff. This should be a point where an enemy weakness allows

maximum combat power to be applied, leading to mission accomplishment. This point can be a location on the ground, a time, or an event. It is not an end state, but a point where decisive results can be achieved. The commander can describe it verbally, with a sketch, or on a map. It should explain how he visualizes the array of forces at the decisive point, what effects he sees it having on the enemy, and how these effects will lead to mission accomplishment.

As a minimum, the commander's guidance should address—

- Specific courses of action to consider or not to consider, both friendly and enemy, and the priority for addressing them.
- The CCIR.
- The reconnaissance guidance.
- Risk guidance.
- Deception guidance.
- Fire support guidance.
- Mobility and countermobility guidance.
- Security measures to be implemented.
- Additional specific priorities for combat support and combat service support.
- Any other information the commander wants the staff to consider.
- The time plan.
- The type of order to issue.
- The type of rehearsal to conduct.

Step 16. Issue a Warning Order

Immediately after the commander gives his guidance, the staff sends subordinate and supporting units a warning order that contains, as a minimum—

- The restated mission.
- The commander's intent.
- The unit's AO (a sketch, an overlay, or some other description).
- The CCIR.
- Risk guidance.
- Reconnaissance to be initiated by subordinate units.

- Security measures.
- Deception guidance.
- Mobility and countermobility guidance.
- Specific priorities.
- The time plan.
- Guidance on rehearsals.

Step 17. Review Facts and Assumptions

During the rest of the decision-making process, the commander and staff periodically review all available facts and assumptions. New facts may alter requirements and analysis of the mission. Assumptions may have become facts or may have become invalid. Whenever the facts or assumptions change, the commander and staff must assess the impact of these changes on the plan and make the necessary adjustments.

Course of Action Development

After receiving guidance, the staff develops COAs for analysis and comparison. The commander must involve the entire staff in their development. His guidance and intent focus the staff's creativity to produce a comprehensive, flexible plan within the time constraints. His direct participation helps the staff get quick, accurate answers to questions that occur during the process. COA development is a deliberate attempt to design unpredictable COAs (difficult for the enemy to deduce).

Qualities of COAs

Each COA considered must meet the criteria of—

- **Suitability.** It must accomplish the mission and comply with the commander's guidance. However, the commander may modify his guidance at any time. When the guidance changes, the staff records and coordinates the new guidance and reevaluates each COA to ensure it complies with the change.
- **Feasibility.** The unit must have the capability to accomplish the mission in terms of available time, space, and resources.
- **Acceptability.** The tactical or operational advantage gained by executing the COA must justify the cost in resources, especially casualties. This assessment is largely subjective.
- **Distinguishability.** Each COA must differ *significantly* from any others. Significant differences may result from use of reserves, different task organizations,

day or night operations, or a different scheme of maneuver. This criteria is also largely subjective.

- **Completeness.** It must be a complete mission statement. (See page 5-8.)

A good COA positions the force for future operations and provides flexibility to meet unforeseen events during execution. It also provides the maximum latitude for initiative by subordinates.

The order from higher headquarters normally provides the what, when, and why for the force as a whole. The who in the COA does not specify the designation of units; it arrays units by type (for example, generic armored battalion or mechanized battalion). Designation of specific units comes later.

During COA development, the commander and staff continue the risk management process, focusing on Steps 1 through 3. (See Appendix J.)

Guidelines and Steps to Develop COAs

There are normally six steps in COA development:

1. [Analyze relative combat power.](#)
2. [Generate options.](#)
3. [Array initial forces.](#)
4. [Develop the scheme of maneuver.](#)
5. [Assign headquarters.](#)
6. [Prepare COA statements and sketches.](#)

The following paragraphs describe each step in detail.

Step 1. Analyze Relative Combat Power. Combat power is the effect created by combining the elements of maneuver, firepower, protection, and leadership in combat against the enemy. The commander integrates and applies the effects of these elements with other potential combat multipliers (combat support (CS), combat service support (CSS), and available assets of other services) against the enemy. His goal is to generate overwhelming combat power to accomplish the mission at minimal cost.

By analyzing force ratios and determining and comparing each force's strengths and weaknesses as a function of combat power, planners can gain some insight into—

- What friendly capabilities pertain to the operation.
- What type operations may be possible from both friendly and enemy perspectives.

- How and where the enemy may be vulnerable.
- What additional resources may be required to execute the mission.
- How to allocate existing resources.

Planners initially make a rough estimate of force ratios. At corps and division levels, relative combat power is an evaluation of rough ratios of combat units two levels down. For example, at division level, planners compare all types of combat battalions; at corps level, they compare friendly brigades versus enemy regiments. At brigade and battalion levels, they may study, in detail, the personnel or weapons on either side.

Planners must not develop and recommend COAs based solely on mathematical analyses of force ratios. Although some numerical relationships are used in this process, the estimate is largely subjective. It requires assessing both tangible and intangible factors, such as friction or enemy will and intentions. Numerical force ratios do not include the human factors of warfare that, many times, are more important than the number of tanks or tubes of artillery. The staff must carefully consider and integrate the intangible factors into their comparisons.

Planners can compare friendly strengths against enemy weaknesses, and vice versa, for each element of combat power. From these comparisons, they may deduce particular vulnerabilities for each force that may be exploitable or may need to be protected. These comparisons may provide planners insights into effective force employment.

By using historical minimum-planning ratios for various combat missions and carefully considering terrain and enemy templating assumptions, the planner can generally conclude what types of operations can be conducted successfully. This step provides the planners with what might be possible, not a specific course of action.

NOTE: FM 34-130 contains planning factors and data for estimating force ratios.

Step 2. Generate Options. Based on the commander's guidance and the results of Step 1, the staff generates options for COA development. A good COA should be capable of defeating all feasible enemy COAs. In a totally unconstrained environment, the goal is to develop several such COAs. Since there is rarely enough time to do this, the commander usually limits the options with his commander's guidance. The options should focus on enemy COAs arranged in order of probable adoption.

Brainstorming is the preferred technique for generating options. It requires time, imagination, and creativity, but it produces the widest range of options. The staff must be unbiased and open-minded in evaluating proposed options. Staff members can quickly identify COAs obviously not feasible in their particular areas of expertise. They can also quickly decide if they can modify a COA to accomplish the requirement or eliminate it immediately. If one staff member identifies information that might affect another's analysis, he shares it immediately. This eliminates wasted time and effort.

In developing COAs, staff members must determine the doctrinal requirements for each type of operation they are considering, to include doctrinal tasks to be assigned to subordinate units. For example, a deliberate breach requires a breach force, a support force, and an assault force. In addition, COA development must look at possibilities created by attachments (a light infantry brigade attached to an armored division opens up the possibility of an air assault), options not feasible because of detachments, assets available for deep operations, and assets needed to support deception operations.

The staff first determines the decisive point, if not already determined by the commander. This is where the unit will mass the effects of overwhelming combat power to achieve a result with respect to terrain, enemy, and time that will accomplish the unit's purpose. This will be the main effort. Next, the staff determines supporting efforts—those tasks other than the main effort that must be accomplished to allow the main effort to succeed. The staff then determines the purposes of the main and supporting efforts. The main effort's purpose is directly related to the mission of the unit; the supporting effort's purpose relates directly to the main effort. The staff then determines the essential tasks for the main and supporting efforts to achieve these purposes.

Once staff members have explored each COA's possibilities, they can examine each (changing, adding, or eliminating COAs as appropriate) to determine if it satisfies COA-selection criteria. The staff must avoid the common pitfall of presenting one good COA among several "throwaway" COAs. Often the commander will find he can combine COAs or move desirable elements from one to another.

Step 3. Array Initial Forces. To determine the forces necessary to accomplish the mission and to provide a

basis for the scheme of maneuver, planners must consider—

- The unit's restated mission and the higher commander's intent and guidance.
- The air and ground avenues of approach (both enemy and friendly).
- As many possible enemy COAs as time permits, starting with the most likely and including the worst case (most dangerous).

Planners then determine the ratio of friendly to enemy units required for each task, starting with the main effort and continuing through all supporting efforts. (They consider the entire battlefield framework, including close, deep, rear, reserve, reconnaissance, and security operations.) Such ratios are planning tools for developing COAs only and not for actual combat. (FM 34-130 contains preferred minimum planning ratios to array forces.) Some operations, such as pursuit, exploitation, and movement to contact, require no particular ratio; however, planners can use a ratio of 1:1. This ratio considers terrain and mission but not weather, initiative, surprise, logistics, or intangibles such as leadership, training, and morale. The ratio is a starting point only; planners can adjust the ratio as they develop the COA.

Planners next determine a proposed forward edge of the battle area (FEBA) for a defense or an LD/LC for an offense. The G2's (S2's) initial terrain analysis should validate the selection, or determine a recommended change, which must then be resolved with higher headquarters.

Planners then consider the deception story. Because aspects of the story may influence unit positioning, planners must consider the story's major elements before developing any courses of action.

Planners next make the initial array of friendly forces, starting with the main effort at the decisive point and continuing through supporting efforts. Planners normally array ground forces two levels down. The initial array focuses on generic ground maneuver units without regard to specific type or task organization, and then considers all combat multipliers, as appropriate. For example, at corps level, planners array two levels down using generic brigades consisting of three battalions. During this step, planners do not assign missions to arrayed units; they merely consider what forces they must allocate to accomplish the mission.

The initial array identifies the total number of units needed, develops a base of knowledge to make decisions, and identifies possible methods of dealing with the enemy during scheme-of-maneuver development. If the number arrayed is less than the number available, the additional units are placed in a pool for use during scheme-of-maneuver development. If the number arrayed is greater than the number available, the shortfall is identified as a possible requirement for additional resources.

Step 4. Develop the Scheme of Maneuver. The scheme of maneuver describes how arrayed forces will accomplish the commander's intent. It is the central expression of the commander's concept for operations and governs the design of supporting plans or annexes. Planners develop a scheme of maneuver by refining the initial array of forces and using graphic control measures to coordinate the operation and to show the relationship of friendly forces to one another, the enemy, and the terrain. During this step, units are converted from generic to specific types of units, such as armor, light infantry, and mechanized infantry. The scheme of maneuver includes—

- The purpose of the operation.
- A statement of where the commander will accept tactical risk.
- Identification of critical friendly events and phases of the operation (if phased).
- Designation of the main effort, along with its task and purpose.
- Designation of supporting efforts, along with their tasks and purposes, linked to how they support the main effort.
- Designation of reserve, to include location, composition, task, and purpose.
- Deep, close, and rear operations.
- Reconnaissance and security operations.
- An outline of the movements of the force.
- Identification of maneuver options that may develop during an operation.
- Location of engagement areas or attack objectives and counterattack objectives.
- Responsibilities for area of operations (AO).
- Concept of fires.
- C²-attack priorities.

- Prescribed formations or dispositions when necessary.
- Priorities for each CS and CSS element in support of the operation.
- Integration of obstacle effects with maneuver and fires.
- Considerations of the effects of enemy weapons of mass destruction (WMD) on the force.

Planners select control measures (graphics) to control subordinate units during the operation. Planners base control measures on the array of forces and the scheme of maneuver to defeat probable enemy courses of action. Control measures clarify responsibilities and synchronize combat power at decisive points while minimizing the command's risk of fratricide. All control measures impose some constraints on subordinate commanders. Control measures used should be the minimum required to exercise necessary control over the operation while still allowing as much freedom of action as possible to subordinate commanders.

Control measures should not split avenues of approach or key terrain between two units. Planners should provide space on the flanks of each avenue of approach to allow for maneuver and fires. The area of operations the planner designates as the main effort may be narrower than others to add weight to that AO. Planners should also develop phase lines to implement expected branches and sequels.

When developing the scheme of maneuver, planners should use any forces remaining from the initial array to provide depth to the battle, provide additional reconnaissance or security, or act as a reserve.

Step 5. Assign Headquarters. Planners next assign headquarters to groupings of forces, creating a task organization. This assignment should consider the types of units to be assigned to a headquarters and its span of control. Planners should not exceed the allocated headquarters' span of control. Generally, a headquarters controls at least two subordinate maneuver units, but not more than five. If planners need additional headquarters, they note the shortage and resolve it later. Task organization takes into account the entire battlefield framework. It also accounts for the special command and control (C²) requirements of operations that have special requirements, such as passage of lines, river crossings, or air assaults.

Step 6. Prepare COA Statements and Sketches. The G3 (S3) prepares a COA statement and supporting sketch for each COA developed. The COA statement must clearly portray how the unit will accomplish the mission and explain the scheme of maneuver. It should include the mission and end state and address the battlefield framework. The sketch provides a picture of the maneuver aspects of the COA. Together, the statement and sketch cover who (generic task organization), what (tasks), when, where, how, and why (purpose) for each subordinate unit, and any significant risks and where they occur for the force as a whole. (See example of COA statement and sketch at [Figure 5-5](#).)

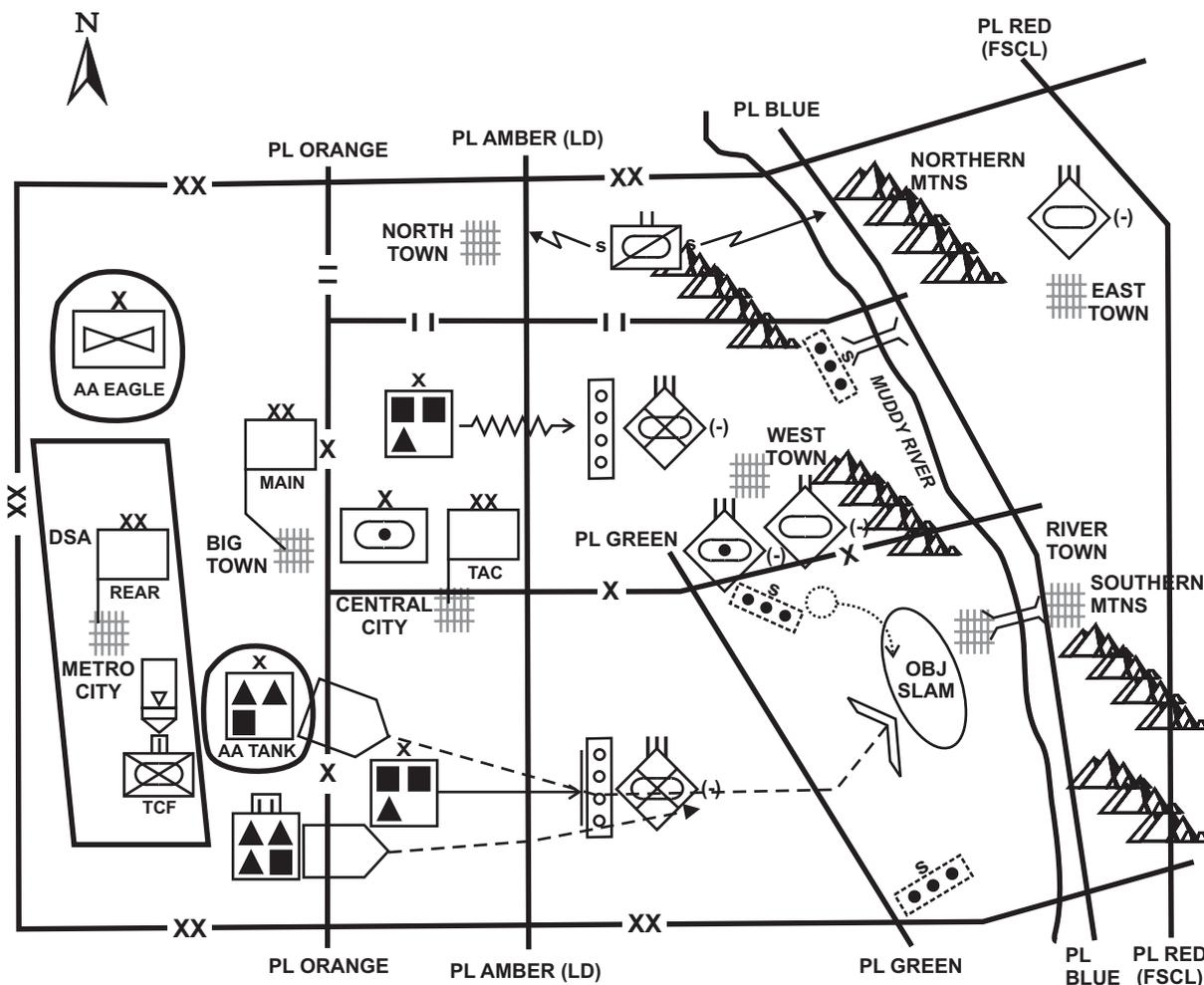
As a minimum, the sketch should include the array of generic forces, and control measures such as—

- Planning unit and subordinate unit boundaries that establish the AO.
- Unit movement formations (does not specify formations of subordinate units).
- The FEBA or LD/LC and subsequent phase lines.
- Reconnaissance and security (R&S) graphics.
- Ground and air axes of advance.
- Assembly areas, battle positions, strongpoints, engagement areas, and objectives.
- Obstacle control measures and tactical mission graphics.
- Fire support coordination measures.
- Designation of the main and supporting efforts.
- Location of command posts.
- Enemy known or templated locations.

Planners can enhance the sketch with identifying features (cities, rivers, roads) to help orient users. The sketch may be on any media—what it portrays is more important than its form.

COURSE OF ACTION CRITERIA

- Suitability
- Feasibility
- Acceptability
- Distinguishability
- Completeness



At 130400 Aug XX, a mechanized division attacks to seize OBJ SLAM to protect the northern flank of the corps main effort. A mechanized brigade attacks in the north, as an economy of force, to fix enemy forces in zone denying them the ability to interfere with the main effort's attack in the south. A mechanized brigade in the south attacks to penetrate enemy forces vicinity PL AMBER to create sufficient maneuver space to allow the main effort to pass to the east without interference from the defending enemy infantry regiment (-). A tank-heavy brigade, the main effort, passes through the southern mechanized brigade and attacks to seize the terrain vicinity of OBJ SLAM denying the enemy access to the terrain south and west of RIVER TOWN. The division reserve, a tank task force, initially follows the southern mechanized brigade prepared to contain enemy forces capable of threatening the main effort's passage, then, if not committed west of PL GREEN, follows the main effort prepared to block enemy forces capable of threatening its movement west, ensuring the seizure of OBJ SLAM. The divisional cavalry squadron screens the division's northern flank to provide early warning of any enemy force capable of threatening the division's northern mechanized brigade. Division deep operations will: 1. Initially attrit enemy artillery capable of ranging the point of penetration to prevent it from massing fires against the two southern brigades; 2. then interdict the enemy tank battalion (-) south of WEST TOWN to prevent its movement south and west towards the main effort. 3. Interdict the enemy tank regiment (-) north of EAST TOWN to prevent its movement west of the PL BLUE allowing the main effort sufficient time to seize OBJ SLAM. Division fires will: 1. Isolate the point of penetration allowing the southern mechanized brigade to conduct a penetration. 2. Prevent enemy artillery from massing fires against the two southern brigades. 3. Support deep operations to prevent uncommitted enemy forces from interfering with the initial penetration or the seizure of OBJ SLAM. A mechanized infantry team acts as the division TCF with priority of responding to any Level III threat to the division's Class III supply point vicinity METRO CITY to ensure the uninterrupted flow of Class III.

Figure 5-5. Example of course of action statement and sketch (division offense)

COA Briefing (Optional)

After the COAs have been developed, they are briefed to the commander for review. The COA briefing includes—

- Updated intelligence preparation of the battlefield (IPB).
- Possible enemy COAs (event templates).
- The restated mission.
- The commander's and the higher commanders' intent (two echelons above).
- The COA statement and sketch.
- The rationale for each COA, including—
 - Considerations that might affect enemy COAs.
 - Deductions resulting from a relative combat power analysis.
 - Reason units are arrayed as shown on the sketch.
 - Reason the staff used the selected control measures.
 - Updated facts and assumptions.

After the briefings, the commander gives any additional guidance. If he rejects all COAs, the staff begins again. If he accepts one or more of the COAs, staff members begin the war-gaming process.

Course of Action Analysis (War Game)

The COA analysis identifies which COA accomplishes the mission with minimum casualties while best positioning the force to retain the initiative for future operations. It helps the commander and his staff to—

- Determine how to maximize combat power against the enemy while protecting the friendly forces and minimizing collateral damage.
- Have as near an identical vision of the battle as possible.
- Anticipate battlefield events.
- Determine conditions and resources required for success.
- Determine when and where to apply the force's capabilities.

- Focus IPB on enemy strengths, weaknesses, center of gravity, desired end state, and decisive points.
- Identify the coordination requirements to produce synchronized results.
- Determine the most flexible course of action.

The War-Gaming Process

Course of action analysis is conducted using war gaming. The war game is a disciplined process, with rules and steps, that attempts to visualize the flow of a battle. The process considers friendly dispositions, strengths, and weaknesses; enemy assets and probable COAs; and characteristics of the area of operations. It relies heavily on a doctrinal foundation, tactical judgment, and experience. It focuses the staff's attention on each phase of the operation in a logical sequence. It is an iterative process of action, reaction, and counteraction. War gaming stimulates ideas and provides insights that might not otherwise be discovered. It highlights critical tasks and provides familiarity with tactical possibilities otherwise difficult to achieve. War gaming is the most valuable step during COA analysis and comparison and should be allocated more time than any other step. However, the commander or CofS (XO) must determine at this point how much time he can commit to the war-gaming process, and ensure this time line is followed.

During the war game, the staff takes a COA and begins to develop a detailed plan, while determining the strengths or weaknesses of each COA. War gaming tests a COA or improves a developed COA. The commander and his staff may change an existing COA or develop a new COA after identifying unforeseen critical events, tasks, requirements, or problems.

The General Rules of War Gaming

War gamers need to—

- Remain objective, not allowing personality or their sensing of "what the commander wants" to influence them. They must avoid defending a COA just because they personally developed it.
- Accurately record advantages and disadvantages of each COA as they become evident.
- Continually assess feasibility, acceptability, and suitability of the COA. If a COA fails any of these tests during the war game, they must reject it.
- Avoid drawing premature conclusions and gathering facts to support such conclusions.

- Avoid comparing one COA with another during the war game. This must wait until the comparison phase.

War-Gaming Responsibilities

The CofS (XO) is responsible for coordinating actions of the staff during the war game.

The G1 (S1) analyzes COAs to project potential personnel battle losses and determine how CSS provides personnel support during operations.

The G2 (S2) role-plays the enemy commander. He develops critical enemy decision points in relation to the friendly COA, projects enemy reactions to friendly actions, and projects enemy losses. He captures the results of each enemy action and counteraction and corresponding friendly enemy strengths and vulnerabilities. By trying to win the war game for the enemy, he ensures that the staff fully addresses friendly responses for each enemy COA. For the friendly force, he—

- Identifies information requirements and refines the event template to include NAIs that support decision points and refines the event matrix with corresponding DPs, target areas of interest (TAIs), and high-value targets (HVTs).
- Refines situation templates.
- Participates in the targeting conference and identifies high-value targets as determined by IPB.

The G3 (S3) normally selects the techniques and methods that the staff will use for war gaming. He ensures the war game of the COA covers every operational aspect of the mission, records each event's strengths and weaknesses, and annotates the rationale. This is used later to compare COAs.

The G4 (S4) analyzes each COA to assess its sustainment feasibility. He determines critical requirements for each sustainment function by analyzing each COA to identify potential problems and deficiencies. He assesses the status of all sustainment functions required to support the COA and compares this to available assets. He identifies potential shortfalls and recommends actions to eliminate or reduce their effect for that COA. While improvisation can contribute to responsiveness, only accurate prediction of requirements for each sustainment function can ensure the continuous sustainment of the force. In addition, the G4 (S4) ensures that available movement times and assets will support the course of action.

Special staff officers help the coordinating staff by analyzing the COAs in their own areas of expertise, indicating how they could best support the mission. Every staff member must determine the force requirements for external support, the risks, and each COA's strengths and weaknesses.

War-Gaming Steps

The staff follows eight steps during the war-gaming process:

1. [Gather the tools.](#)
2. [List all friendly forces.](#)
3. [List assumptions.](#)
4. [List known critical events and decision points.](#)
5. [Determine evaluation criteria.](#)
6. [Select the war-game method.](#)
7. [Select a method to record and display results.](#)
8. [War-game the battle and assess the results.](#)

Step 1. Gather the Tools. The CofS (XO) directs the staff to gather the necessary tools, materials, and data for the war game. Units need to war-game on maps, sand tables, or other tools that accurately reflect the nature of the terrain. The staff then posts the COA on a map displaying the operations area. Tools required include, but are not limited to—

- Current coordinating staff estimates.
- Event template.
- Recording method.
- Completed COAs, to include maneuver and R&S graphics.
- Means to post enemy and friendly unit symbols.
- Map of AO.

Step 2. List all Friendly Forces. The commander and staff consider all available combat, CS, and CSS units that can be committed to the battle, paying special attention to support relationships and constraints. The friendly force list remains constant for all COAs the staff analyzes.

Step 3. List Assumptions. The commander and staff review previous assumptions for continued validity and necessity.

Step 4. List Known Critical Events and Decision Points. Critical events are those that directly influence mission accomplishment. They include events that trigger significant actions or decisions (commitment of an enemy reserve), complicated actions requiring detailed study (a passage of lines), and essential tasks identified during mission analysis. The list of critical events includes major events from the unit's current position to the accomplishment of the mission. Decision points are events or locations on the battlefield where tactical decisions are required during mission execution. Decision points do not dictate what the decision is, only that one must be made, and when and where it should be made, to have the maximum impact on friendly or enemy COAs. Therefore, critical events and decision points must be listed for each enemy COA war-gamed against. Decision points relate to identified critical events and are linked to NAIs and TAIs. The staff must keep the list of critical events and decision points manageable. The more time available for planning, the longer the list. When time is short, the staff must reduce the list to only essential critical events and decision points.

Step 5. Determine Evaluation Criteria. Evaluation criteria are those factors the staff uses to measure the relative effectiveness and efficiency of one COA relative to other COAs following the war game. Evaluation criteria change from mission to mission. Evaluation criteria may include anything the commander desires. Examples include—

- The principles of war.
- Doctrinal fundamentals for the kind of operations being conducted.
- The commander's guidance and intent.
- The level of residual risk for accident hazards in the course of action.

The criteria should look not only at what will create success, but also at what will cause failure.

Step 6. Select the War-Game Method. There are three recommended techniques—the belt, the avenue-in-depth, and the box. Each one considers the area of interest and all enemy forces affecting the outcome of the operations. The techniques can be used separately or in combination, or the staff can devise one of its own.

The *belt technique* divides the battlefield into belts (areas) running the width of the AO (Figure 5-6). The shape of the belt is based on battlefield analysis. The belt

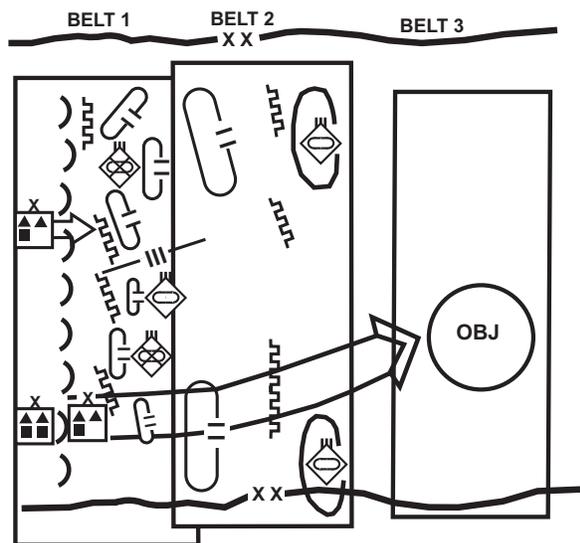


Figure 5-6. Belt war-gaming technique

technique is most effective when terrain is divided into well-defined cross-compartments; during phased operations (such as river crossing, air assault, or airborne operations), or when the enemy is deployed in clearly defined belts or echelons. Belts can be adjacent to or even overlap each other. At a minimum, belts should include the area of—

- Initial contact either along the FLOT or LD/LC, or in the covering force area (CFA).
- Initial penetration or initial contact along the FEBA.
- Passage of the reserve or commitment of a counterattack.
- The objective (offense) or defeat of the enemy (defense).

This technique is based on sequential analysis of events in each belt. It is preferred because it focuses simultaneously on all forces affecting a particular event. A belt might include more than one critical event.

When time is short, the commander can use a modified belt technique. The modified technique divides the battlefield into not more than three sequential belts. These belts are not necessarily adjacent or overlapping, but focus on the critical actions throughout the depth of the area of operations.

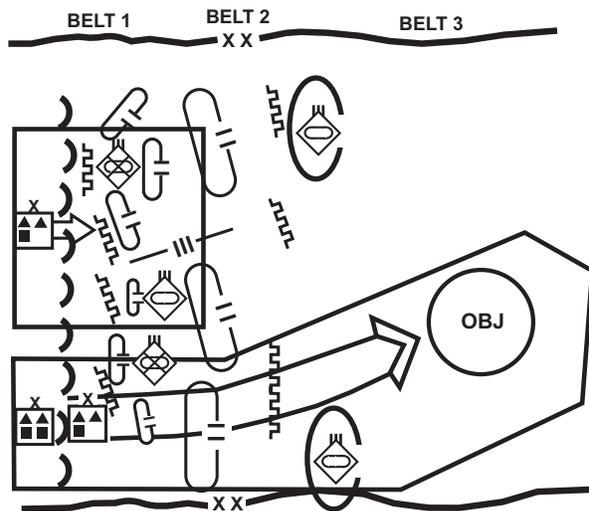


Figure 5-7. Avenue-in-depth war-gaming technique

The *avenue-in-depth technique* focuses on one avenue of approach at a time, beginning with the main effort (Figure 5-7). This technique is good for offensive COAs or in the defense when canalizing terrain inhibits mutual support.

The *box technique* is a detailed analysis of a critical area, such as an engagement area (EA), a river-crossing site, or a landing zone (LZ). (See Figure 5-8.) It is most useful when time is limited, as in a hasty attack. When using this technique, the staff isolates the area and focuses on critical events in it. Staff members assume that friendly units can handle most of the situations on the battlefield and focus their attention on essential tasks.

Step 7. Select a Method to Record and Display Results. Recording the war game's results gives the staff a record from which to build task organizations, synchronize activity, develop decision support templates (DSTs), confirm and refine event templates, prepare plans or orders, and analyze COAs based on identified strengths and weaknesses. Two methods are used to portray the action—the synchronization matrix (Figure 5-9, page 5-20) and the sketch note. In both, staff members record any remarks regarding the strengths and weaknesses they discover. The amount of detail depends on the time available. Details and methods of recording and displaying war-game results are best addressed in unit SOPs.

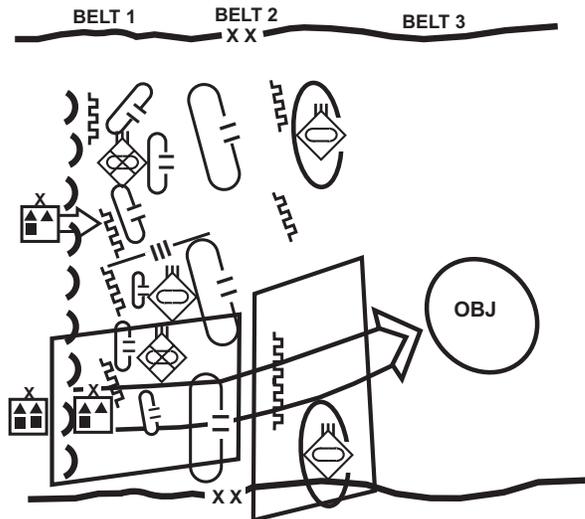
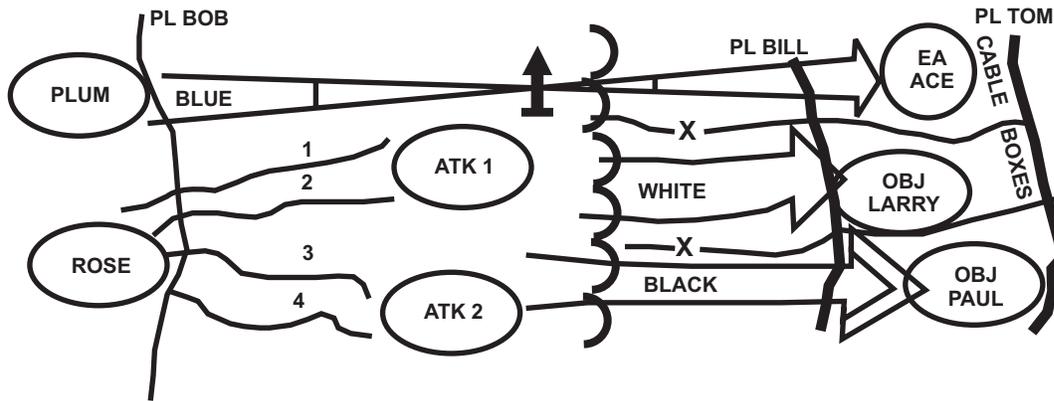


Figure 5-8. Box war-gaming technique

The *synchronization matrix method* allows the staff to synchronize the COA across time and space in relation to the enemy COA. An advantage of this method is that it can be readily translated into a graphic decision-making product, such as a decision support template, at the war game's conclusion. The first entry is time or phases of the operation. The second entry is the most likely enemy action as determined by the G2 (S2). The third entry is the decision points for the friendly COA. The remainder of the matrix is developed around selected functional areas or the major subordinate commands of the unit conducting the war game. Other operations, functions, and units that are to be integrated, or the use of which the staff wants to highlight, can be incorporated into the matrix.

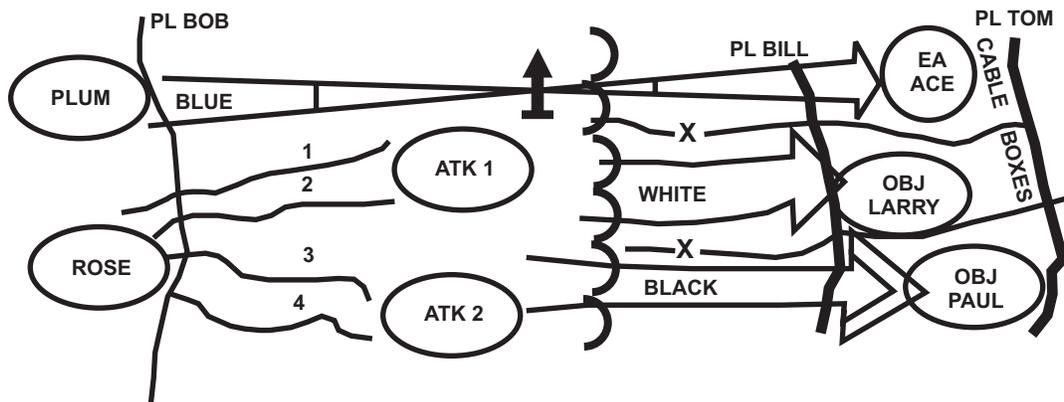
However, the passage of time between the creation of the synchronization matrix and the execution of operations may result in changes to the initial conditions with respect to the enemy, status of friendly forces, and even weather. Once execution begins, the predictability of enemy actions at any point on the synchronization matrix decreases the further away those actions are on the time line. This decreases the likelihood that the synchronization matrix will be correct and increases the likelihood that adjustment to the plan will have to be made.



TIME		-18hr	-14hr	-12hr
ENEMY ACTION			Enemy monitors movements Continue deep preparation	
DECISION POINTS		Initiate movement AA ROSE		
M A N E U V E R	DEEP			
	SECURITY	Recon secures routes		Cav prepares to screen north flank
	CLOSE			1 Bde moves on routes 1 & 2
	RESERVE			3 Bde moves on routes 1 & 2
	REAR			
AIR DEFENSE		Weapons HOLD		Weapons TIGHT
FIRE SUPPORT				
IEW		Confirm second belt and RAG position		Confirm reserve position
ENGINEER		Route maintenance		
C S S	MAN		Replacements held at division	
	ARM	Cache artillery ammunition		
	FIX	Cannibalization authorized at DS level		Establish div main CP
	FUEL			
	MOVE	Initiate movement from AA ROSE		
	SUSTAIN	Finance service suspended		
C ²				TAC CP with lead bde

NOTE: The first column is representative only and can be modified to fit individual needs such as including information operations.

Figure 5-9. Example of synchronization matrix



- 8hr	H-hr	+ 6hr	+ 10 hr
		Fights from first belt position	Defend from second belt position
	Launch deep attack		
		Avn bde attacks reserve in EA ACE	
	Cav screen north flank		
2 Bde moves on routes 3 & 4	Bdes cross LD/LC		1 Bde seizes OBJ LARRY
TCF moves on route 3			
Protect lead bde	Weapons FREE	Weapons TIGHT	
Prepare fire	Provide DS/GS	Fire SEAD	
Conduct nonlethal fires	Confirm reserve movement		
	Prepare forward log sites		
		Establish forward cl V point	
Refuel bdes		Establish forward cl III point	
		Move stocks forward	
Establish AXP M1		Establish AXP M2	Finance service reinstated
	Div rear boundary moves east of PL BOB		Main CP prepares to move

Figure 5-9. Example of synchronization matrix (continued)

CRITICAL EVENT									
Sequence Number	Action	Reaction	Counter-action	Assets	Time	Decision Point	CCIR	Control Measures	Remarks

Figure 5-10. War-game work sheet

The *sketch note method* uses brief notes concerning critical locations or tasks. These notes reference specific locations on the map or relate to general considerations covering broad areas. The commander and staff note locations on the map and on a separate war-game work sheet (Figure 5-10). Staff members use sequence numbers to reference the notes to the corresponding locations on the map or overlay, using the same numbers on the war-game work sheet for easy reference. Staff members also identify actions by grouping them into sequential action groups, giving each subtask a separate number. They use the war-game work sheet to identify all pertinent data for a critical event. They assign the event a number and a title and use the columns on the work sheet to identify and list in sequence—

- Tasks and assets (allocated forces).
- Expected enemy actions and reactions.
- Friendly counteractions and assets.
- Total assets needed for the task.
- Estimated time to accomplish the task.
- Decision points when the commander must decide to execute the task.
- CCIR.
- Control measures.

Step 8. War-Game the Battle and Assess the Results. During war gaming, the commander and staff try to foresee the dynamics of a battle’s action, reaction, and

counteraction. The staff analyzes each selected event by identifying the tasks the force must accomplish one echelon down, using assets two echelons down. Identifying the COAs’ strengths and weaknesses allows the staff to make adjustments as necessary.

The war game follows an action-reaction-counteraction cycle. *Actions* are those events initiated by the side with the initiative (normally the force on the offensive). *Reactions* are the other side’s actions in response. *Counteractions* are the first side’s responses to reactions. This sequence of action-reaction-counteraction is continued until the critical event is completed or until the commander determines that he must use some other COA to accomplish the mission.

The staff considers all possible forces, including templated enemy forces outside the AO, that could conduct a counterattack. The staff evaluates each friendly move to determine the assets and actions required to defeat the enemy at each turn. The staff should continually evaluate the need for branches to the plan that promote success against likely enemy moves in response to the friendly COA.

The staff lists assets used in the appropriate columns of the worksheet and lists the totals in the assets column (not considering any assets lower than two command levels down).

The commander and staff look at many areas in detail during the war game, including movement considerations, closure rates, lengths of columns, depths of formations, ranges and capabilities of weapons systems, and

desired effects of fires. They look at setting the conditions for success, protecting the force, and shaping the battlefield. Experience, historical data, SOPs, and doctrinal literature provide much of the necessary information. During the war game, staff officers conduct risk management for each COA ([Appendix J](#)).

The staff continually assesses the risk to friendly forces from weapons of mass destruction strikes, seeking a balance between mass and dispersion. When assessing WMD risk to friendly forces, the planners view the target the force presents through the eyes of an enemy target analyst. They must consider ways to reduce vulnerability and determine the mission-oriented protective posture (MOPP) level needed for protection consistent with mission accomplishment. They must also consider deployment of nuclear, biological, and chemical (NBC) decontamination units.

The staff identifies the CS and CSS assets required to support the scheme of maneuver and the synchronization of the support and sustainment effort. If requirements exceed available assets, the staff recommends to the commander the priority for use based on the commander's guidance and intent and on the situation. To maintain flexibility, the commander may decide to hold back some assets for unforeseen tasks or opportunities. He uses this analysis to determine his priorities of support.

During the war game, the commander can modify the COA based on how things develop. When modifying the course of action, the commander should validate the composition and location of main and supporting efforts and reserve forces, based on METT-T, and adjust control measures as necessary. The commander may also identify combat situations or opportunities or additional critical events that require more analysis. This should be conducted expeditiously and incorporated into the final results of the war game.

The war game should result in the commander and staff—

- Refining or modifying the COA, to include identifying branches and sequels that become on-order or be-prepared missions.
- Refining location and timing of the decisive point.
- Identifying key or decisive terrain and determining how to use it.
- Refining the enemy event template and matrix.

- Refining task organization, to include forces retained in general support (GS) of the command.
- Identifying tasks the unit must retain and tasks to be assigned to subordinate commanders.
- Allocating combat, CS, and CSS assets to subordinate commanders to accomplish their missions.
- Developing a synchronization matrix and decision support template.
- Estimating the duration of each critical event as well as of the entire operation.
- Projecting the percentage of total enemy forces defeated in each critical event, and overall.
- Identifying likely times and areas for enemy use of WMD and friendly NBC defense requirements.
- Identifying the location and commitment of the reserve.
- Identifying the most dangerous enemy COA.
- Identifying the location of the commander and unit command posts (CPs).
- Identifying additional critical events.
- Identifying additional requirements for CS and CSS support.
- Determining requirements for deception and surprise.
- Refining C² requirements, to include control measures and updated operational graphics.
- Finalizing CCIR and IR with the last time information is of value (LTIOV).
- Finalizing the reconnaissance and surveillance plan and graphics for the basis for the collection plan.
- Refining CCIR and incorporating them into the reconnaissance and surveillance plan and graphics.
- Developing fire support, engineer, air defense, information operations (IO), and CSS plans and graphics.
- Identifying or confirming the locations of decision points, NAIs, and TAIs, and the information needed to support the decision points.
- Determining the timing of force concentration and initiation of the attack or counterattack.

- Developing the intelligence collection and dissemination plan.
- Determining movement times and tables.
- Identifying, analyzing, and evaluating strengths and weaknesses of the COA.
- Integrating the targeting process, to include identifying or confirming high-payoff targets and determining attack guidance.
- Synchronizing smoke operations.
- Identifying additional hazards, assessing their risk, developing control measures to reduce risk from all identified hazards, and determining residual risk.

War-Game Briefing (Optional)

Time permitting, a war-game briefing is conducted to ensure the staff comprehends fully the results of the war game. This briefing is not given to the commander, but is the staff's means to review the war games to ensure that the decision briefing to the commander covers all relevant points. It is normally given to the CofS (XO) or the deputy or assistant commander. The format is—

- Higher headquarters' mission, commander's intent, and deception plan.
- Updated IPB.
- Enemy COAs that were war-gamed.
- Friendly COAs that were war-gamed.
- Assumptions.
- War-gaming technique used.
- For each COA war-gamed—
 - Critical events that were war-gamed.
 - Possible enemy actions and reactions.
 - Modifications to the COA.
 - Strengths and weaknesses.
 - Results of the war game.

Course of Action Comparison

The COA comparison starts with each staff officer analyzing and evaluating the advantages and disadvantages of each COA from his perspective. Each staff member presents his findings for the others' consideration. Using the evaluation criteria developed earlier, the

staff then outlines each COA, highlighting its advantages and disadvantages. Comparing the strengths and weaknesses of the COAs identifies their advantages and disadvantages with respect to each other.

The staff compares feasible courses of action to identify the one that has the highest probability of success against the most likely enemy COA and the most dangerous enemy COA. The selected COA should also—

- Pose the minimum risk to soldiers, equipment, and mission accomplishment.
- Best position the force for future operations.
- Provide the best flexibility to meet “unknowns” during execution.
- Provide maximum latitude for initiative by subordinates.

The actual comparison of COAs is critical. The staff may use any technique that facilitates the staff reaching the best recommendation and the commander making the best decision. The most common technique is the decision matrix, which uses evaluation criteria to assess the effectiveness and efficiency of each COA. (See Figure 5-11, and Figure 5-12, page 5-26.) Each staff officer may use his own matrix, using the same evaluative criteria, for comparison in his own field of interest. Decision matrixes alone cannot provide decision solutions. Their greatest value is to provide analysts a method to compare several competing COAs against criteria which, when met, will produce battlefield success. The matrix should use the evaluation criteria developed earlier. The CofS (XO) normally determines the weight of each criterion based on its relative importance. The staff officer responsible for a functional area scores each COA using that criteria. Multiplying the score by the weight yields the criterion's value. The staff officer then totals all values. However, he must be cautious in portraying subjective conclusions as being the objective results of quantifiable analysis. Comparing COAs by category is more accurate than attempting to aggregate a total score for each COA.

Commander's Decision Briefing

After completing its analysis and comparison, the staff identifies its preferred COA and makes a recommendation. If the staff cannot reach a decision, the CofS (XO) decides which COA to recommend at the

CRITERIA (note 1)	WT (note 2)	COA 1 (note 3)	COA 2 (note 3)	COA 3 (note 3)
Maneuver	3	2 (6)	3 (9)	1 (3)
Simplicity	3	3 (9)	1 (3)	2 (6)
Fires	4	2 (8)	1 (4)	3 (12)
Intelligence	1	3 (3)	2 (2)	1 (1)
ADA	1	1 (1)	3 (3)	2 (2)
Mobility/ Survivability	1	3 (3)	2 (2)	1 (1)
CSS	1	2 (2)	1 (1)	3 (3)
C ²	1	1 (1)	2 (2)	3 (3)
Residual Risk	2	1 (2)	2 (4)	3 (6)
C ² W	1	2 (2)	1 (1)	3 (3)
TOTAL Weighted TOTAL		20 (37)	18 (31)	22 (40)

NOTES:

- Criteria are those assigned in Step 5 of the war-gaming process.
- Should the CofS/XO desire to emphasize one as more important than another, he assigns weights to each criterion based on relative importance.
- Courses of action are those selected for war gaming.

Procedure: The staff assigns numerical values for each criterion after war-gaming the COA. Values reflect the relative advantages or disadvantages of each criterion for each COA action. The lowest number is best. The initially assigned score in each column is multiplied by the weight and the product put in parenthesis in the column. When using weighted value, the lower value assigned indicates the best option. The numbers are totaled to provide a subjective evaluation of the best COA without weighing one criterion over another. The scores are then totaled to provide "best" (lowest number value) COA based on weights the commander assigns. Although the lowest value denotes the best solution, the best solution may be more subjective than the objective numbers indicate. The matrix must be examined for sensitivity. Although COA 2 is the "best" COA, it may not be supportable from a CSS standpoint. The decision maker must either determine if he can acquire additional support or if he must alter or delete the COA.

Figure 5-11. Sample decision matrix: numerical analysis

commander's decision briefing. The staff then briefs the commander. The decision-briefing format includes—

- The intent of the higher headquarters (higher and next higher commanders).
- The restated mission.
- The status of own forces.
- An updated IPB.

- Own COAs, including—
 - Assumptions used in planning.
 - Results of staff estimates.
 - Advantages and disadvantages (including risk) of each COA (with decision matrix or table showing COA comparison).
- The recommended COA.

Course of Action	Advantages	Disadvantages
COA 1	Main attack avoids major terrain obstacles. Adequate maneuver room for main attack and reserve.	Main attack faces stronger resistance at beginning.
COA 2	Main attack gains good observation early. Supporting attack provides flank protection to main attack.	Initially, reserve may have to be employed in zone of supporting attack. Needs detailed and rehearsed procedural and positive controls.

DECISION MATRIX

DISCUSSION:

Factors	Course of Action	
	1	2
Casualty estimate	+	-
Medical evacuation routes	-	+
Suitable location for medical facilities	0	0
Available EPW facilities	-	+
Suitable CP locations	-	+
Courier and distribution routes	-	+
Effects of attachments and detachments on force cohesion, casualty reporting, and replacement operations	-	+
Residual Risk	+	-

BROAD CATEGORIES

NOTE: The factors in the above example are neither all-inclusive nor always applicable.

Figure 5-12. Sample decision matrix: subjective analysis and broad categories

Course of Action Approval

After the decision briefing, the commander decides on the COA he believes to be the most advantageous. If he rejects all developed COAs, the staff will have to start the process over again. If the commander modifies a proposed COA or gives the staff an entirely different one, the staff must war-game the revised or new one to derive the products that result from the war-game process. Once the commander has selected a COA, he may refine his intent statement and CCIR to support the selected COA. He then issues any additional guidance on priorities for CS or CSS activities (particularly for resources he needs to preserve his freedom of action and to ensure continuous service support), orders preparation, rehearsal, and preparation for mission execution.

Having already identified the risks associated with the selected COA, the commander decides what level of residual risk he will accept to accomplish the mission and approves control measures that will reduce the risks. If there is time, he discusses the acceptable risks with

adjacent and senior commanders. However, he must obtain the higher commanders' approval to accept any risk that might imperil the higher commanders' intent.

Based on the commander's decision, the staff immediately issues a warning order with essential information so that subordinate units can refine their plans.

Orders Production

Based on the commander's decision and final guidance, the staff refines the COA and completes the plan and prepares to issue the order. The staff prepares the order or plan to implement the selected COA by turning it into a clear, concise concept of operations, a scheme of maneuver, and the required fire support. The commander can use the COA statement as his concept of operations statement. The COA sketch can become the basis for the operation overlay. Orders and plans provide all necessary information subordinates require for execution, but without unnecessary constraints that would inhibit subordinate initiative. The staff assists

subordinate staffs as needed with their planning and coordination.

The concept of operations is the commander's clear, concise statement of where, when, and how he intends to concentrate combat power to accomplish the mission in accordance with his higher commander's intent. It broadly outlines considerations necessary for developing a scheme of maneuver. It includes actions within the battlefield organization, designation of the main effort, the commander's plan to defeat the enemy, and specific command and support relationships. These relationships are then included in the task organization and organization for combat in plans and orders.

During orders production, the staff implements accident risk controls by coordinating and integrating them into the appropriate paragraphs and graphics of the OPOD. It is essential to communicate how controls will be put into effect, who will implement them, and how they fit into the overall operation.

Finally, the commander reviews and approves orders before the staff reproduces and briefs them. The commander and staff should conduct confirmation briefings with subordinates immediately following order issue to ensure subordinates understand the commander's intent and concept.

DECISION MAKING IN A TIME-CONSTRAINED ENVIRONMENT

The focus of any planning process should be to quickly develop a flexible, tactically sound, and fully integrated and synchronized plan that increases the likelihood of mission success with the fewest casualties possible. However, any operation may "outrun" the initial plan. The most detailed estimates cannot anticipate every possible branch or sequel, enemy action, unexpected opportunities, or changes in mission directed from higher headquarters. Fleeting opportunities or unexpected enemy actions may require a quick decision to implement a new or modified plan.

Before a unit can conduct decision making in a time-constrained environment, it must master the steps in the full MDMP. A unit can only shorten the process if it fully understands the role of each and every step of the process and the requirements to produce the necessary products. Training on these steps must be thorough and result in a series of staff battle drills that can be tailored

to the time available. Training on the MDMP must be stressful and replicate realistic conditions and time lines. (See Appendix K.)

Although the task is difficult, all staffs must be able to produce a simple, flexible, tactically sound plan in a time-constrained environment. METT-T factors, but especially limited time, may make it difficult to follow the entire MDMP. An inflexible process used in all situations will not work. The MDMP is a sound and proven process that must be modified with slightly different techniques to be effective when time is limited. There is still only one process, however, and omitting steps of the MDMP is not the solution. *Anticipation, organization, and prior preparation* are the keys to success in a time-constrained environment. Throughout the remainder of the chapter, reference to a process that is abbreviated is for simplicity only. It does not mean a separate process, but the same process shortened.

The commander decides how to shorten the process. What follows are suggested techniques and procedures that will save time. They are not exhaustive or the only ways to save time, but they have proved useful to units in the past. These techniques are not necessarily sequential in nature, nor are all of them useful in all situations. What works for a unit depends on its training and the factors of METT-T in a given situation. The commander can use these, or techniques of his own choosing, to abbreviate the process. (See Figure 5-13, page 5-28.)

General Considerations

The process is abbreviated any time there is too little time for its thorough and comprehensive application. The most significant factor to consider is time. It is the only nonrenewable, and often the most critical, resource.

There are four primary techniques to save time. The first is to increase the commander's involvement, allowing him to make decisions during the process without waiting for detailed briefings after each step.

The second technique is for the commander to become more directive in his guidance, limiting options. This saves the staff time by focusing members on those things the commander feels are most important.

The third technique, and the one that saves the most time, is for the commander to limit the number of COAs developed and war-gamed. In extreme cases, he can direct that only one course of action be developed. The

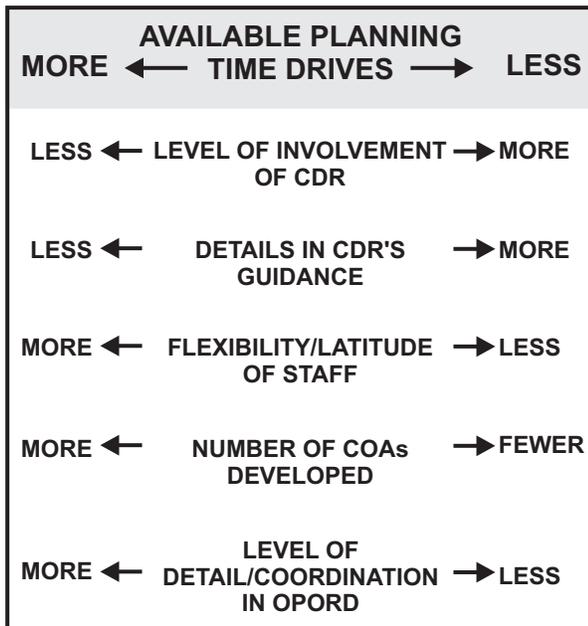


Figure 5-13. Planning continuum

goal is an acceptable COA that meets mission requirements in the time available, even if it is not optimal.

The fourth technique is maximizing parallel planning. Although parallel planning is the norm, maximizing its use in a time-constrained environment is critical. In a time-constrained environment, the importance of warning orders increases as available time decreases. A verbal warning order now is worth more than a written order one hour from now. The same warning orders used in the full MDMP should be issued when the process is abbreviated. In addition to warning orders, units must share all available information with subordinates, especially IPB products, as early as possible.

While the steps used in a time-constrained environment are the same, many of them may be done mentally by the commander or with less staff involvement than during the full process. The products developed when the process is abbreviated may be the same as those developed for the full process; however, they may be much less detailed and some may be omitted altogether.

When developing its plan, the staff may initially use the full process and develop branches and sequels during execution using the process when it is modified. A unit may use the complete process to develop the plan, while a subordinate headquarters uses the same process abbreviated.

The advantages of using the process when it is abbreviated are—

- It maximizes the use of available time.
- It allows subordinates more planning time.
- It focuses staff efforts on the commander's specific and directive guidance.
- It facilitates adaptation to a rapidly changing situation.
- It allows the commander to compensate for lack of a staff or for an inexperienced staff.

The disadvantages are—

- It is much more directive and limits staff flexibility and initiative.
- It does not explore all available options when developing friendly COAs.
- It may result in only an oral order or a fragmentary order.
- It increases the risk to the unit of overlooking a key factor or uncovering a significantly better option.
- It may decrease the coordination and synchronization of the plan.

The time saved on any step can be used to—

- Refine more thoroughly the commander's plan.
- Conduct a more deliberate and detailed war game.
- Consider in detail potential branches and sequels.
- Focus more on the actual rehearsal and preparation of the plan.

The Commander's Role

The commander decides what adjustments to make to the MDMP, giving specific guidance to the staff to focus the process and save time. If the commander has access to only a small portion of the staff or none at all, he will have to rely even more than normal on his own expertise, intuition, creativity, and battlefield awareness. He may have to decide on his course of action, mentally war-game the outcome, and confirm his decision to the staff all in a relatively short time. If so, his decision will be based more on his experience than on a formal integrated staff process. The commander may elect to have his staff spend most of its time developing, refining, and war-gaming his COA rather than developing multiple courses of action.

The commander should avoid changes to his guidance unless a significantly changed situation dictates major revisions. Frequent minor changes to the guidance can easily result in lost time as the staff makes constant minor adjustments to the plan.

The commander should consult with subordinate commanders before making a decision, if possible. Subordinate commanders are closer to the fight and can more accurately portray the enemy's situation and that of their own unit. Additionally, consulting with subordinates will give them insight into the upcoming operation and allow them to conduct parallel planning.

In situations where the commander must decide quickly, he should contact his higher headquarters and advise them of his selected COA as it may affect the branches and sequels his superiors are planning.

The Staff's Role

The importance of staff estimates increases as time decreases. Decision making in a time-constrained environment almost always takes place after a unit has entered into the area of operations and has begun to execute operations. This means that the IPB and some portion of the staff estimates should already exist. Detailed planning before operations provides the basis for information the commander and staff will need to make knowledgeable decisions as operations continue. Staff members must keep their estimates up to date so that when planning time is limited they can provide accurate, up-to-date assessments quickly and move directly into COA development. When time is short, the commander and staff use as much of the previously analyzed information and products from earlier decisions as possible. Although some of these products may change significantly, many, such as the IPB that is continuously updated, will remain the same or require little change.

The staff must use every opportunity to conduct parallel planning with the unit's higher headquarters. Parallel planning can save significant time, but if not carefully managed, it can also waste time. As a general rule, the staff must never get ahead of the higher headquarters in the planning process. The majority of time spent conducting parallel planning should be spent developing the foundation of the plan, such as mission analysis. The staff should not develop and analyze COAs without specific guidance and approval from higher headquarters.

Mission Receipt

This part of the process does not change in a time-constrained environment. However, the commander decides at this step whether or not to abbreviate the process and, if so, specifies how he wants to do it. [See the discussion on page 5-3.](#)

Mission Analysis

The commander's involvement is the key to saving time in mission analysis. He must get personally involved by supervising and managing the mission analysis process. If time is not available to conduct a detailed mission analysis, the commander and staff will rapidly perform mission analysis together to determine the restated mission.

The IPB process requires constant attention. Many delays during mission analysis can be traced to the IPB. The G2 (S2) must quickly update the IPB based on the new mission and changed situation. This is critical to allow needed reconnaissance assets to deploy early to collect information to adjust the initial plan. Enemy event templates must be as complete as possible prior to the mission analysis briefing. Because they are the basis for war gaming, they must be constantly updated as new information becomes available.

Staff officers conduct as formal a mission analysis briefing as time allows. However, they may be forced to brief their estimates orally, covering only information that has changed from the last staff estimate, without the use of charts or other tools. When severely time-constrained, they brief only critical information that directly affects the new mission. If the commander has been directly involved in the mission analysis, he may decide to skip the mission analysis briefing completely.

Commander's Guidance

A key way to save time is in the issuance of the commander's guidance. The elements of the commander's guidance may be the same as the full MDMP's, but the guidance is more detailed and directive. The commander can provide detailed information outlining what he expects in each COA developed, including tentative task organization and scheme of maneuver. He may also determine which enemy COAs he wants friendly COAs war-gamed against as well as the branches or sequels he wants incorporated in each COA. Detailed guidance keeps the staff focused by establishing parameters to

work within. Commander's guidance must be constantly reviewed and analyzed. As the situation changes and information becomes available, the commander may have to alter his guidance. This type of detailed guidance limits the staff's flexibility and initiative to save time, but it allows the staff more time to synchronize the COA during the war-game session.

Once the guidance is issued, the staff immediately sends a warning order to subordinate units.

Course of Action Development

Significant time is saved by increased commander involvement in COA development, resulting in detailed and directive commander's guidance. The greatest savings in time for the MDMP comes from the commander directing the staff to develop only a few courses of action instead of many.

The commander and selected staff save additional time by conducting a hasty war game once the COAs are developed. The hasty war game allows the commander to determine if he favors one or more COAs out of several proposed. It develops and matures one or more COAs prior to the formal war game. If the commander cannot be present during the hasty war-game session, then the staff conducts a COA backbrief to the commander after the hasty war game. From the hasty war game, the commander can make an early decision, allowing him to refine his COA and make any necessary adjustments prior to the detailed war game. In extreme situations, this may be the only opportunity to conduct the war-game process.

The hasty war game can also be used to select a single COA for further development. A commander's early decision to go with a single COA allows his staff to focus on the selected COA instead of on multiple COAs. It also allows the staff to concentrate on synchronizing the COA rather than on continuing to develop the COA during the formal war-game session.

When time is severely limited, the quickest process comes from the commander deciding to immediately begin personally developing *one* COA, with branch plans, against the enemy's most likely course of action. The commander determines which staff officers are critical to assist him in this phase, depending on the type of operation being planned. The minimum is normally the G2 (S2), G3 (S3), FSCoord, engineer coordinator (ENCOORD), and CofS (XO). The commander may also include subordinate commanders, if available. This

team must quickly develop a flexible COA that it feels will accomplish the mission.

Limiting the number of COAs developed carries with it the risk of overlooking a significantly better COA. Developing only one COA is the most risky approach. It provides the staff with the least flexibility to apply its creativity and explore options.

Saving time by not using the enemy event templates is a poor technique. The commander and staff must use the enemy event templates when developing COAs. Without them, they cannot conduct the analysis of relative combat power and the arraying of initial forces.

Course of Action Analysis

The commander and staff must war-game the COAs to ensure all elements are fully integrated and synchronized. An early decision to limit the number of COAs war-gamed, or to develop only one COA, saves the greatest amount of time in this process. When war-gaming the COAs, it is best to do so against all feasible enemy courses of action. However, the commander can save additional time by having the staff war-game against a smaller number of enemy COAs.

The commander's involvement can save significant time in this step by allowing the staff to focus on only the most essential aspects of the war game. The commander can supervise the war game and be prepared to make decisions, provide guidance, delete unsatisfactory concepts, and assist in keeping the staff focused. If the commander is present during the war gaming of multiple COAs, he may identify the COA he favors. He can then discard unwanted COAs, allocating more time to refine the selected COA.

The commander must always assess risk, especially since by limiting the number of COAs, he has increased risk to the command. He must evaluate the COA to ensure it will not render the force incapable of anticipated operations or lower the unit's combat effectiveness beyond acceptable levels.

The staff should use the box technique, focusing on the most critical event first, such as actions at the objective or the engagement area. If time permits, the staff war-games other critical events or boxes as well. The commander and staff must identify and prioritize the critical events they want analyzed. These critical events can be identified by analyzing essential tasks. The staff war-games as many critical events as possible in the allotted amount of time.

Staff officers save time if they specifically define and limit the evaluation criteria before they begin the war-game process. Significant factors can be quantified, if possible, and limited to the four or five most important, based on the mission statement, commander's intent, and commander's guidance.

The staff must work to support the commander's plan. However, as the staff refines the plan, it cannot become so biased that it develops a plan that is infeasible and insupportable. If the staff determines that it cannot support the commander's plan, a new COA must be developed.

The use of recorders is particularly important. These recorders should be trained to capture coordinating instructions, subunit instructions, and information required to synchronize the operation during the war-gaming process. If this occurs, a portion of the order is written before the planning process is complete.

The location used for the war game must be prepared and configured by the time the staff is ready to conduct the war game. Charts and boards must be cleaned and prepared for use. The blown-up terrain sketch and enemy SITTEMPs must be prepared and present for the war-game session.

When only one COA is developed, the purpose of the COA analysis is to verify, refine, synchronize, and integrate the commander's COA and recommend modifications as necessary. However, the analysis should follow the formal war-game process as much as time allows to help the commander visualize the outcome and identify potential branches and sequels. As time allows, the staff can further war-game and develop these branches and sequels.

Course of Action Comparison

If the commander decides to war-game only one COA, or if he chooses one during the war game, no course of action comparison is needed. If multiple COAs have been war-gamed and the commander has not made a decision, the staff must conduct the COA comparison detailed on [page 5-24](#). Limiting the evaluation criteria is the only significant shortcut in this step.

Course of Action Approval

If the commander has observed and participated in the planning process, the decision may be rapidly apparent and the commander can make an on-the-spot decision. If the commander has not participated in the process to this point, or has not made a decision, a decision briefing will still be required. Good COA comparison charts and sketches assist the commander in visualizing and distinguishing between each COA. The staff must ensure the COAs are complete with tentative task organization, COA statement, and task and purpose for each subordinate unit. Time can also be saved by limiting the course of action briefing to only the most critical points.

If only one COA was developed, no decision is required, unless the developed COA becomes unsuitable, infeasible, or unacceptable. If this occurs, another COA must be developed.

Once the decision is made, the staff immediately sends out a warning order.

Orders Production

There are several ways to save time in orders production. These are addressed in [Appendix H, Plans and Orders](#).