MAGTF Intelligence Production and Analysis

U.S. Marine Corps

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**Unless otherwise stated, whenever the masculine gender is used, both
men and women are included.**

FOREWORD

Marine Corps Doctrinal Publication 2, *Intelligence*, and Marine Corps Warfighting Publication (MCWP) 2-1, *Intelligence Operations,* provide the doctrine and higher order tactics, techniques, and procedures for intelligence operations. MCWP 2-12, *MAGTF Intelligence Production and Analysis,* complements and expands upon this information by detailing doctrine, tactics, techniques, and procedures for the conduct of intelligence production and analysis in support of the Marine air-ground task force (MAGTF).

The target audience of this publication is intelligence personnel responsible for the planning and execution of intelligence production and analysis operations.

The MCWP 2-12 provides the information needed by Marines to understand, plan, and execute intelligence production and analysis to support MAGTF operations. It describes intelligence doctrinal fundamentals, the nature of analytical thinking, intelligence preparation of the battlespace, and intelligence support to targeting. This publication also discusses intelligence command and control, communications and information systems support, intelligence products and formats, planning, execution, and training.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

/s/
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MAGTF INTELLIGENCE PRODUCTION AND ANALYSIS

TABLE OF CONTENTS

Chapter 3   Filtering, Recording, and Evaluating

Section I   Filtering

Section II   Recording

Section III   Evaluation

Chapter 4   Analytical Thinking

Section I   Analytical Process

Section II Step 2—Describe the Battlespace Effects

Section III Step 3—Evaluate the Threat

Section IV Step 4—Determine Threat Courses of Action

Section V Decision Support Template

Chapter 6   Analysis of the Battlespace

Section I   Responsibilities

Section II   Characteristics of the Battlespace

Section III   Terrain Analysis

Section IV   Hydrographic Analysis

Section V   Airspace Analysis

Section VI   Weather Analysis

Section VII   Infrastructure Analysis

Chapter 7   Threat Analysis Techniques

Section I   Intelligence Preparation of the Battlespace Techniques

Chapter 8   Target Development and Combat Assessment

Section I   Targeting

Section II   Combat Assessment

Chapter 9   Intelligence Production

Chapter 10 Operations

Section I   Operational Maneuver From the Sea

Section II   Sustained Operations Ashore

Section III   Military Operations Other Than War

Figures

Figures (Continued)

Tables

CHAPTER 1. FUNDAMENTALS

Marine air-ground task force (MAGTF) intelligence provides decision-makers with an understanding of the battlespace. This understanding encompasses a sophisticated knowledge of the threat and the physical, political, economic, and cultural environment in the area of operations (AO). That knowledge is developed through intelligence production and analysis (P&A).

What is Intelligence Production and Analysis?

P&A is the filtering, recording, evaluating, and analyzing of information, and product preparation of developed intelligence.

Analysis is a process that involves sifting and sorting evaluated information to isolate significant elements related to the mission of the command, determining the significance of the information relative to information and intelligence already known, and drawing deductions about the probable meaning of the evaluated information. Production is the conversion of evaluated material or information into intelligence. All sources of information are integrated, analyzed, evaluated, and interpreted to prepare intelligence products or all-source intelligence in support of known or anticipated user requirements. Production or the process of analysis and synthesis is the most important action in developing usable intelligence for the commander. Production, the fourth step in the intelligence cycle, helps forecast the effect gathered intelligence will have on the commander's ability to accomplish the mission.

Intelligence Functions

To support the commander, MAGTF intelligence organizations carry out six intelligence functions of which the P&A function is an inte-

gral part. In each function, data is synthesized into intelligence that provides a portion of the knowledge from which the commander can reach an acceptable level of understanding before making a decision. Intelligence answers the all-important question: "What effect does all this have on our ability to accomplish the mission?" Intelligence organizations—

- Support the commander's estimate.
- Develop the situation.
- Provide indications and warning.
- Support force protection.
- Support targeting.
- Support combat assessment.

Intelligence Cycle

The intelligence cycle consists of a series of related activities that translate the need for intelligence about a particular aspect of the battlespace or threat into a knowledge-based product that is provided to the commander for use in the decision-making cycle (see fig. 1-1).
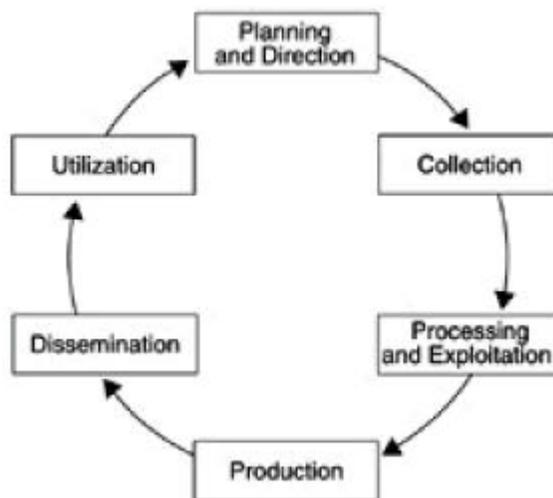
Figure 1-1. Intelligence Cycle.

Planning and Direction

The initial step identifies intelligence needs and develops a plan for satisfying those needs.

Collection

In this step, information used to generate intelligence is drawn from—

- Intelligence data that is derived from assets primarily dedicated to intelligence collection (e.g., imagery systems, electronic intercept equipment, human intelligence sources).
- Sensor data that is derived from sensors whose primary mission is surveillance or target acquisition, air surveillance radar, counterbattery radar, and remote ground sensors.
- Combat data that is derived from reporting by operational units.

Processing and Exploitation

This step converts collected information into an understandable form suitable for the production of intelligence. Processing is accomplished during collection or production. Data collected in a form suitable for analysis is processed automatically during collection. Other types of data require extensive processing, which can affect the timeliness and accuracy of the resulting information. Because processing and production are often accomplished by the same organization, production management generally encompasses processing functions that are required to convert raw data into a usable format. Examples of processing and exploitation include—

- Film processing.
- Document translation.
- Signals intercept.

Production

Production, the fourth step, converts data into intelligence and creates the knowledge (see fig. 1-2) needed for the planning and execution of operations. The intelligence must deliver knowledge, in
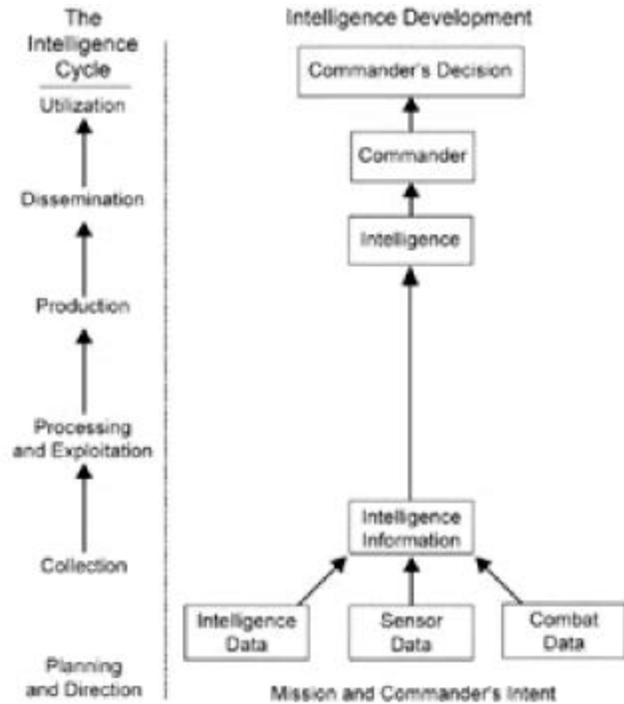
Figure 1-2. Intelligence Cycle in Support of Commander's Decision.

context, in time, and in a form usable in the decisionmaking process. In any situation, providing timely, accurate, and relevant intelligence to commanders and planners is a critical consideration. Production (analysis and synthesis) can be complex, such as comprehensive and detailed intelligence studies required to support the planning of a Marine expeditionary force (MEF) in a major theater war (MTW), or simple, such as direct answers to rapidly changing questions needed to support the ongoing battle at the battalion level. For this reason, production is distinguished as—

- Deliberate production makes full use of available information to provide a complete and extensive product that satisfies non-time sensitive intelligence requirements (IRs). This type of production normally supports operations planning.
- Immediate production identifies information directly applicable to current operations, the information is subjected to a compressed ver-

sion of the production process, and the resulting product is rapidly disseminated to those affected. This production is associated with mission execution.

Dissemination

This step conveys intelligence to users.

Utilization

During utilization, the processed intelligence is used to influence the conduct of operations.

Production Steps

Production (analysis and synthesis) encompasses the following steps, which begin with the receipt of processed information and end with the completion of an intelligence product that is ready for dissemination:

- Filtering is the discarding of irrelevant or repetitive information prior to its entering the production process.
- Recording is the reduction of information to writing or graphical representation and then the arranging of that information into groups of related items.
- Evaluating is the determining of the pertinence, reliability, and accuracy of information.
- Analyzing is the process in which information is analyzed and synthesized to predict possible outcomes.
- Product preparation is the incorporating of developed intelligence into an appropriate product (e.g., text reports and studies, graphics, overlays, or combinations) for dissemination.

Preparation for Analysis

The first three production steps are tools used to prepare information for analysis. The objective is to discard information not pertinent to the situa-

tion, organize and document the information in a manner that facilitates analysis, and assess the quality of the individual elements of information to determine the reliability and importance of each report or piece of information.

In deliberate production, comprehensive procedures are often employed to accomplish filtering, recording, and evaluating. The complexity of these procedures increases with the level of command, scope of the operation, and number of agencies or elements participating in the production process. However, it is important to note that filtering, recording, or evaluation systems are tools to support the analytical effort, not an end unto themselves. Intelligence personnel must be thoroughly familiar with the methodology being employed in preparing information for analysis to ensure that the pertinent information is available to the right analyst when needed.

In immediate production, a central node or individual, normally the intelligence watch in the combat operations center, makes a rapid assessment of each piece of incoming information to determine its pertinence and to evaluate its reliability and accuracy. The intelligence watch personnel's evaluation is based on their knowledge and understanding of the enemy situation, the current intelligence estimate, and ongoing and planned friendly operations and IRs. The watch performs the minimal collating and recording necessary so that an immediate tactical analysis may be completed and judgments made. Simultaneous with or upon completion of immediate production, the information is entered into the formal recording and evaluation system for further use in deliberate production. At lower tactical echelons, the entire process, from receipt of information to dissemination and utilization, can take a matter of seconds or minutes. Organization, established standing operating procedures, and individual and unit training are key components of effective preparation for, and conduct of, P&A.

Analytical Process

Intelligence analysis provides the commander with the battlespace and threat knowledge required for planning and executing combat operations. Intelligence analysts lessen the uncertainty facing a commander, permitting the commander to make decisions and to focus combat power on courses of action (COAs) that maximize the opportunity for success. The analysis framework used by intelligence analysts is described as analysis, synthesis, and estimation. This framework provides a disciplined approach to gathering and understanding information and a means for the analyst to place information in context and relate it to planned or ongoing operations.

Analysis

Effective analysis requires that intelligence analysts—

- Possess a thorough knowledge of—
  - Military operations.
  - Characteristics of the battlespace.
  - Friendly situation and IRs.
  - Threat situation (current situation, doctrine, and past practices).
- View collected information in relation to the—
  - Unit's mission.
  - Commander's intent.
  - Commander's IRs.
- Divide the battlespace into component parts to isolate and define the individual elements of significant information that include—
  - Physical dimensions (i.e., length, depth, width, and altitude).
  - Time.
  - Threat force structure (e.g., divisions, wings, groups, task forces).
  - Battlespace activities (e.g., command and control [C2], air and space defense, fire support).

- Other characteristics that facilitate understanding and satisfy the MAGTF's needs.
- Identify key elements of the situation to—
  - Formulate hypotheses.
  - Make deductions from those hypotheses.
  - Reach conclusions.
- Compare the existing situation to new pieces of information to determine if they relate to the identified key elements and to assess the impact of the new information on the current intelligence estimate.

Synthesis

In this step, intelligence analysts—

- Identify and integrate relationships between individual significant pieces of information with the existing battlespace picture to provide a new image of the situation.
- View the battlespace as a coherent whole.
- Discern emerging patterns in environmental conditions or enemy activity.

Estimation

The bottom line of the analytical process, estimation is based on the detailed study of the tactical situation, experience, intelligence successes, the application of specific tools and methods, and the supported commander's intelligence needs. Estimation is not guessing and it is not predicting! Estimation must describe the current conditions and present an image of future possibilities. Well-founded estimates reduce uncertainty and help the commander plan and execute successful MAGTF operations. Building on the image developed during analysis and synthesis, intelligence analysts determine a threat's—

- Capabilities.
- Intent.
- Probable COA.
- Likely reactions to friendly operations.

Product Preparation

Products are prepared by translating the results of analysis into usable intelligence formats that are timely, accurate, and tailored to both the unit and its mission. Intelligence analysts must strive to provide knowledge that the decision-maker can easily and quickly visualize and absorb. A series of standard intelligence products are used to support MAGTF operations. Standard production formats facilitate rapid preparation, mutual support between intelligence sections, ease of dissemination, and, most importantly, familiarity for the user. The baseline production formats provided in this manual can be tailored to meet the requirements of any operational situation. The following standard all-source intelligence products are prepared in MAGTF:

- Intelligence preparation of the battlespace (IPB) graphics, matrices, and charts.
- MAGTF contingency intelligence studies.
- Intelligence estimates.
- Target or objective studies.
- Intelligence summaries.
- Intelligence reports.

Operations and Command and Control

Intelligence drives the planning and execution of operations by providing a menu of factors that the commander considers when making a decision. The analytical and production effort identifies these factors and presents them to decisionmakers in a form that enables them to understand the battlespace, place intelligence in context, and use the product to carry out successful operations. P&A shapes operations by—

- Identifying potential advantages offered by the environment.
- Defining the limitations imposed by the environment.

- Locating and assessing enemy strengths to be avoided.
- Determining enemy vulnerabilities to be exploited.
- Providing an estimate of likely enemy actions and reactions based on reasoned analysis, synthesis, and judgment.

Intelligence and operations must be linked throughout the planning, decision, execution, and assessment (PDE&A) cycle at all command echelons. The PDE&A cycle provides the framework for the implementation of C2, which enhances the commander's ability to make sound and timely decisions. Whether the commander uses the analytical or intuitive decisionmaking approach, intelligence P&A reduces uncertainty.

Deliberate intelligence production shapes the operations plan and provides the knowledge that facilitates execution (see fig. 1-3 on page 1-6). Immediate intelligence production identifies situation changes that modify the plan or trigger decisions during execution of the operation. Intelligence production provides the basis for assessing the effectiveness of current operations, while operations drive the P&A effort. The mission and commander's intent focus the initial IPB, while the potential COAs, the concept of operations, the future planning effort, and IRs determine the scope and content of the production process. Intelligence products must be relevant to the mission and be used to satisfy specific operational and tactical IRs.

Production and Analysis Company, Intelligence Battalion

The P&A company is the MEF's primary all-source P&A element. An organic unit within the intelligence battalion (intel bn), P&A company is composed of an imagery intelligence platoon, a topographic platoon, an all-source fusion platoon, and two direct support teams. The P&A company is in general support of the MAGTF and provides direct support teams to MAGTF
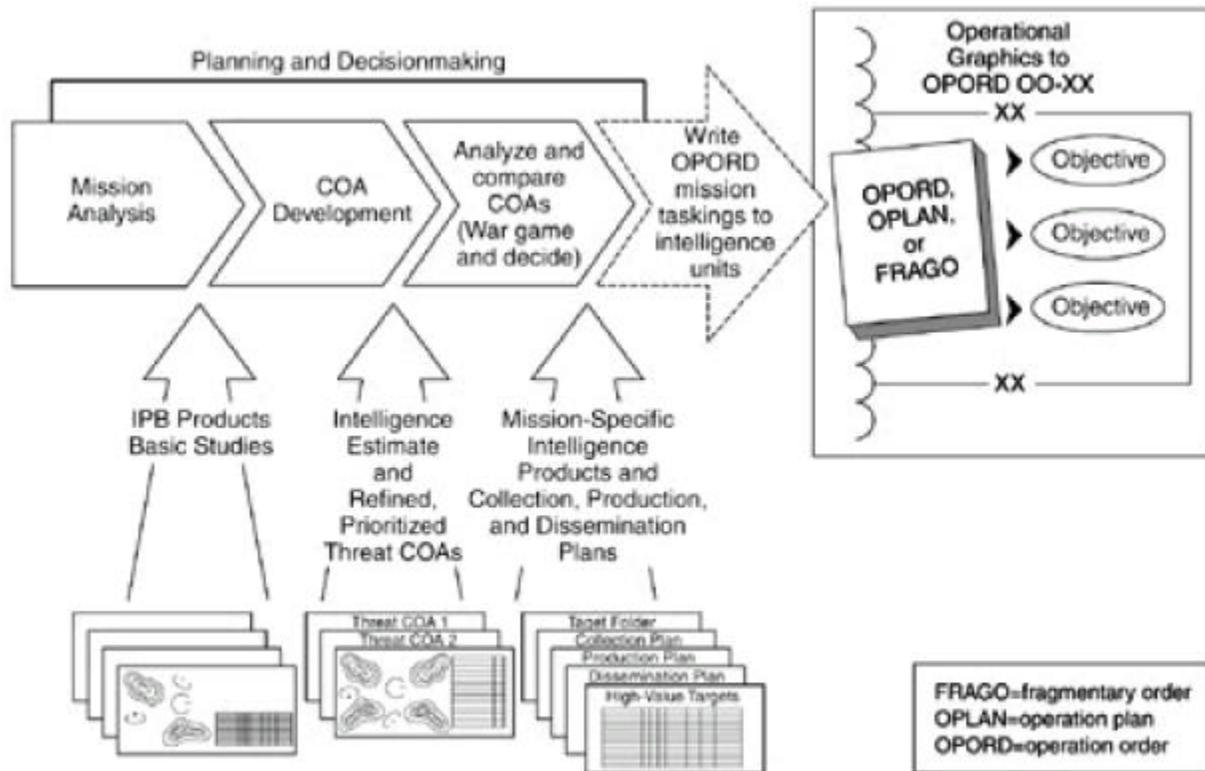
Figure 1-3. Intelligence Support to Planning and Decisionmaking.

subordinate elements, as required. The P&A company performs the following tasks:

- Assists the intel bn commander with planning, developing, and directing the MAGTF intelligence production plan and its integration with the collection and dissemination plans.

- Provides and maintains centralized all-source P&A in support of the MAGTF within the MAGTF P&A cell.

- Maintains an all-source picture of MAGTF AO and area of interest (AOI) threat situation.

- Provides MAGTFs and other commands with geographic intelligence (GEOINT) and geospatial information and services.

- Provides command and control of the topographic platoon.

- Provides imagery analysis and imagery intelligence (IMINT) production support for MAGTFs and other commands.

- Provides command and control of the imagery intelligence platoon.

- Provides task-organized, trained, and equipped detachments or teams to assist MAGTFs or designated commands in the processing, exploitation, evaluation, integration, analysis, interpretation, production, and dissemination of all-source intelligence.

Although the P&A company is a subordinate element of the MEF intel bn and the MAGTF's only dedicated production element, the company responds to the IRs of the entire force. The MAGTF G-2, through the intel bn commander in the role as intelligence support coordinator, establishes the P&A company's analytical and production priorities based on the MAGTF's mission, commander's intent, priority intelligence requirements (PIRs), the current and projected enemy situation, and ongoing planning for future operations. The P&A company focuses primarily on deliberate

production. In garrison or a pre-crisis environment, the P&A company conducts mainly IPB of potential contingency areas to produce MAGTF contingency intelligence studies. During operations and exercises, the P&A company develops intelligence to support future operations, deliberate targeting, and development of the key target or objective area studies. A detailed discussion of the P&A company organization, functions, and employment is provided in chapter 2.

CHAPTER 2. ORGANIZATIONS AND RESPONSIBILITIES

Marine Corps operational forces are organized for combat as MAGTFs. Marine intelligence P&A operations are conducted primarily to facilitate planning and execution of MAGTF operations through the development of tactical intelligence. This chapter discusses responsible officers, organization, supporting organizations, and communications and information systems (CIS) architecture necessary to conduct MAGTF intelligence P&A.

MAGTF Commander

Intelligence is an inherent responsibility of command, and commanders must—

- Be personally involved in the conduct of intelligence activities.
- Specify intelligence requirements and establish PIRs.
- Provide guidance to ensure a timely and useful product.
- Develop an appreciation for the capabilities and limitations of intelligence.
- Make the final synthesis of intelligence.
- Supervise the overall intelligence effort to ensure the product is timely, relevant, and useful.
- Ensure intelligence activities support subordinate commanders as well as the parent unit.
- View intelligence training of all personnel as a command responsibility.

To ensure the timely development of useful intelligence products, the commander has specific P&A responsibilities.

Focus the Analytical and Production Effort

The commander must—

- Provide guidance and direction to ensure that the intelligence developed satisfies requirements.
- Issue a statement of intent and approval of the command's priority intelligence requirements, focusing the analytical and production effort.
- Supervise the process to ensure that it is responding to the intent and intelligence needs.
- Provide direction in the scope of the IPB effort, preferred product formats, and priorities among subordinates' production requirements (PRs).

Participate in the Analytical Process

The commander must understand and participate in the analytical process. Since intelligence analysis is based on incomplete information and involves assumptions and judgments, the commander must scrutinize the process by analyzing intelligence operations and resulting products to determine the operational impact and overall effectiveness.

Evaluate the Product

To provide the basis for continued improvement of the P&A effort, the commander must—

- Evaluate key areas (e.g., product content, presentation, timeliness).
- Identify where the intelligence provided met expectations and where and how it fell short.

- Provide timely and constructive feedback to the intelligence officer, the supporting intel bn commander or detachment officer in charge, and P&A elements.

Marine Expeditionary Force Command Element Intelligence Officer

The MEF assistant chief of staff (AC/S) G-2 focuses on overall C2 and direction of MEF intelligence, counterintelligence (CI), and reconnaissance operations, to include P&A. The MAGTF commander relies on the AC/S G-2 to provide the necessary information on the weather, terrain, and enemy capabilities, status, and intentions. Through intelligence operation plans (OPLANs) and supporting intelligence and reconnaissance and surveillance plans, the AC/S G-2—

- Plans and coordinates intelligence priorities.
- Integrates collection, production, and dissemination.
- Allocates resources.
- Assigns specific missions to subordinate elements.
- Supervises the overall intelligence and reconnaissance efforts.

Intelligence Battalion Commander

The intel bn commander is responsible for planning and directing, collecting, processing, producing, and disseminating intelligence, and providing CI support to the MEF and MEF major subordinate commands (MSCs).

Responsibilities in Garrison

In garrison, the principal task of the intel bn commander is to organize, train, and equip detachments that support MAGTFs or other designated commands to execute integrated collection, intelligence analysis, production, and product dissemination.

Responsibilities During Operations

During operations the intel bn commander is dual-hatted as the intelligence support coordinator (ISC), serving under the direct staff cognizance of the MEF AC/S G-2. The intel bn S-3 section and the MEF G-2 operations center element form the core of the ISC support effort and conduct planning, directing, and C2 within the intelligence operations center (IOC) support cell. Generally, the IOC is collocated with the main command post of the MEF command element (CE). As ISC, the intel bn commander is responsible to the MEF AC/S G-2 for the overall MEF IR management. During operations, the ISC is responsible for—

- Implementing the concept of intelligence operations developed by the G-2 plans officer and approved by the AC/S G-2.
- Establishing and supervising the MEF IOC, which includes P&A cell, surveillance and reconnaissance cell (SARC), and support cell.
- Developing, consolidating, validating, and prioritizing recommended PIRs and IRs to support MAGTF planning and operations.
- Planning, developing, integrating, and coordinating MEF intelligence collection, production, and dissemination plans.
- Exercising C2 staff cognizance of supporting intelligence and reconnaissance organizations to ensure unity of effort and production of all-source intelligence.
- Developing, in conjunction with the G-2 plans officer and G-2 operations officer, and completing Annex B (Intelligence) to MEF operation order (OPORD), supporting appendices, and intelligence input to other OPORD annexes.
- Providing intelligence support to MEF CE G-2 section and MSCs.

● Preparing the intelligence and CI estimates to support G-2 plans.

● Planning, developing, integrating, and coordinating intelligence and CI support to the commander's estimate, situation development, indications and warning, force protection, targeting, and combat assessment.

Intelligence Battalion

Within the MEF, the intel bn is organized to conduct intelligence operations for the MEF, MEF MSCs, subordinate MAGTFs, and other commands as directed (see fig. 2-1).
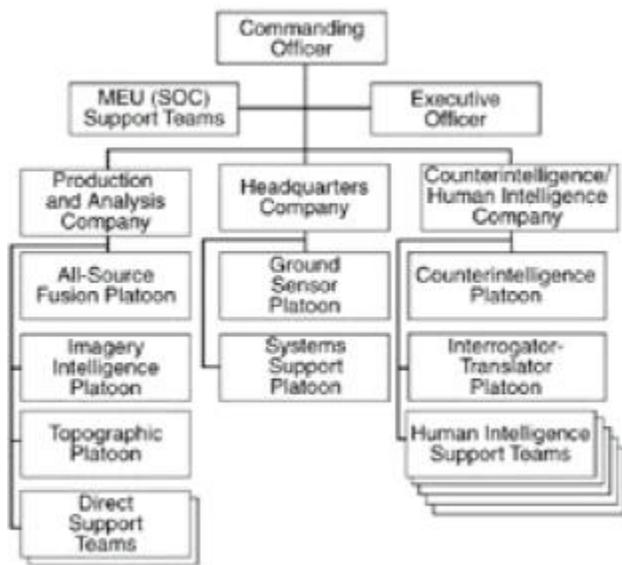
Figure 2-1. Intelligence Battalion Organization.

Production and Analysis Company

The P&A company, intel bn, is the focal point for deliberate intelligence production within the MEF. Although all P&A company elements contribute to the deliberate production process, the focal point for all-source analysis, order of battle (OOB), target intelligence, battle damage assessment (BDA), and deliberate production is the all-source fusion platoon (AFP).

All-Source Fusion Platoon

The AFP, in conjunction with other elements of the intel bn and production elements of radio battalion, force reconnaissance company, Marine tactical electronic warfare squadron (VMAQ), and Marine unmanned aerial vehicle squadron (VMU), provide the capability for all-source intelligence P&A support to the full range of operations conducted by the MEF and other MAGTFs. During operations, AFP forms the core of P&A cell.

Organization for Support

Intel bn's P&A company is organized to provide intelligence support to elements of the MEF CE and MSCs. During operations, P&A company is functionally organized into teams as the P&A cell. The teams support other MAGTF staff organization cells (see table 2-1).

**Table 2-1. P&A Company
Organization for Support.**

Intel Bn, P&A Company Team or Unit	MEF CE Supported Cell
All-source fusion platoon	
● Analysis team	G-3 current and future operations, G-5, and other MEF staff elements*
● OOB team	G-3 current and future operations, G-5, and other MEF staff elements*
● Target analysis and BDA team	G-3 targeting cell and other MEF staff elements*
● IPB team	G-3 current and future operations, G-5, and other MEF staff elements*
Topographic platoon	MEF
Imagery intelligence platoon	MEF
Direct support teams	P&A cell, G-3 current or future operations, G-5, or designated MSC G-2
*The P&A cell supports the G-4, G-1, and other MEF CE staff elements, as appropriate.	

Production and Analysis Cell

The mission of P&A cell is to plan, coordinate, and produce fused all-source tactical intelligence in support of the MEF, its MSCs, and other MAGTFs and commands as directed. A multi-disciplined group of intelligence officers and specialists, the P&A cell provides the intelligence necessary to support contingency planning and current intelligence threat requirements of the MEF, its subordinate MAGTFs, and other commanders as directed.

Tasks

During operations and exercises, the P&A cell provides the intelligence necessary to support current and future operations, future plans, targeting, and development of enemy situation and capabilities. It is responsible for processing information and intelligence from organic and external commands and intelligence organizations. The P&A cell personnel—

- Receive, process and exploit, integrate, analyze, evaluate, interpret, and synthesize intelligence and other information into comprehensive and tailored intelligence products required for the planning and execution of MAGTF operations.

- Provide intelligence support across the conflict spectrum and in support of deliberate and crisis planning, MAGTF deployments, and other operations as directed.

- Provide a dynamic, detailed OOB picture of threats within the MAGTF AO and AOI.

- Provide detailed intelligence P&A support to targeting.

- Maintain a MAGTF-wide summation of damages caused to hostile targets and augment BDA efforts of MAGTF elements as required.

- Provide MAGTF-level BDAs for forwarding to the component, joint task force (JTF), and/or theater commander in chief (CINC) as applicable.

- Provide IPB support to the MAGTF G-3/S-3 and G-5 for battle management and planning efforts and provide IPB-related support to MAGTF elements beyond their organic capabilities.

- Disseminate intelligence products and information to the MAGTF staff and MSCs in a timely, relevant manner.

- Establish and maintain intelligence data bases to support intelligence P&A.

- Coordinate with the collection management and dissemination officer to provide the SARC with collection requirements for MAGTF and external collection units.

- Coordinate with the dissemination manager to disseminate intelligence products throughout the MEF and external organizations.

- Coordinate with the MEF G-2 and intel bn commander/ISC to—

  - Ensure disseminated intelligence and products are understood.

  - Determine whether intelligence products answer commander's PIRs and users' IRs.

  - Identify new intelligence production requirements (IPRs) that result from disseminated intelligence products.

  - Assess the overall effectiveness of intelligence production operations.

Organization

The P&A cell is essentially organized in garrison as it would be organized for operations. Each team has the flexibility to add intelligence and nonintelligence specialists (e.g., G-2 operations red cell members) from other intelligence and reconnaissance organizations as required based on the specific mission and intelligence needs of the MAGTF. For sustained MEF-level operations, global sourcing from other Marine Corps organizations may be required to augment the P&A team structure and to provide sufficient personnel depth for 24-hour operations.

The following P&A cell internal organization and subordinate teams and units provide the P&A functions required to support current and future operations, future planning, targeting, and BDA.

P&A Cell Staff

Members of the staff provide leadership and support functions such as maintenance of the intelligence library. In conjunction with the intel bn's collection management and dissemination officer, P&A cell staff members are responsible for production and IPR management as well as coordination of IPRs with intel bn's overall IR collection and dissemination.

Analysis Teams

The two analysis teams are composed of all-source analysts and specialists from other disciplines (e.g., medical, weather, CI/human intelligence [HUMINT], imagery, terrain, signals intelligence [SIGINT]). With support from other elements of the P&A company, the rest of intel bn, radio battalion, force reconnaissance, VMU, VMAQ, and MSC G-2 intelligence analysts, P&A cell analysis teams produce integrated all-source intelligence products to include—

- Contingency and other focused intelligence studies.
- Intelligence estimates.
- Intelligence summaries.
- Briefings.

OOB Teams

The P&A cell has two OOB teams. These teams analyze and maintain a detailed, comprehensive, evolving picture of ground, air, naval, electronic, weapons of mass destruction, and other threats within the MAGTF AO and AOI. The OOB teams perform OOB analysis, and the primary products include—

- Graphic or electronic situation overlays.

- OOB data bases and files.
- Threat models for various threat elements.

Target Analysis and BDA Teams

The two target analysis and BDA teams focus on detailed analysis of MAGTF commander, staff, and MSC-identified targets not destined for the air tasking order (ATO). (The Marine aircraft wing [MAW] G-2 section generally manages target and BDA analysis and intelligence support for ATO-nominated targets.) These teams—

- Provide target development and analysis to support the MAGTF deliberate and reactive targeting efforts.
- Maintain the comprehensive picture of battle damages caused to targets.
- Prepare BDA reports and assessments, which support the MEF combat assessment effort.

IPB Teams

The two IPB teams focus on IPB production support to the MEF G-3 and G-5 in the areas of current battle management and future planning. They also assist subordinate unit intelligence personnel with IPB-related production when requirements are beyond the organic capabilities of that unit.

Direct Support Teams

The two P&A cell direct support teams allow enhanced IR management, intelligence P&A, and dissemination capabilities to be focused down to one or more MSCs. Direct support teams augment the supported unit's intelligence section by—

- Providing an extension of the intel bn's P&A cell or MSC G-2 intelligence operations element for the receipt, collaborative analysis, production, and dissemination of intelligence to the supported unit.
- Tailoring higher and external intelligence products to the needs of the supported unit.

● Assisting the supported unit's intelligence officer in the formulation and management of external IRs.

● Assisting the supported unit in the production of IPB and other intelligence products to support detailed mission planning and execution.

● Enhancing the intelligence dissemination efforts of the supported unit's intelligence section.

Supporting Organizations

Several organic MAGTF intelligence organizations support the P&A cell P&A effort by contributing specialized MAGTF intelligence expertise and resources. The intel bn commander, serving as the ISC, is directly responsible to MEF AC/S G-2 for exercising C2 staff cognizance of supporting intelligence and reconnaissance organizations to ensure unity of effort and production of all-source intelligence. These supporting organizations contribute to fused, all-source MAGTF intelligence products. The following supporting intelligence and reconnaissance organizations provide significant specialized support to the P&A cell P&A effort.

Imagery Intelligence Platoon

Organized under the intel bn, P&A company, imagery intelligence platoon (IIP) provides imagery interpretation support for MEF requirements and maintains the imagery data base and imagery library for the MAGTF (see fig. 2-2). The IIP is capable of providing IMINT derived from available imagery sources in support of MEF P&A cell products. This includes annotated imagery in support of MEF P&A cell production or in response to separate IRs. A key imagery exploitation resource organic to the IIP is the tactical exploitation group (TEG), which is an element of the broader Joint Services Imagery Processing System (JSIPS). The IIP normally concentrates on the exploitation of imagery and production of IMINT from MEF,
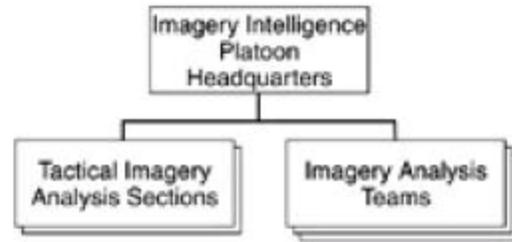
Figure 2-2. IIP Organization.

JTF, and other tactical resources, such as unmanned aerial vehicles (UAVs) or the F/A-18D (RC) advanced tactical aerial reconnaissance system (ATARS).

Topographic Platoon

Organized under the intel bn, P&A company, the topographic platoon provides geospatial information and GEOINT support for all MAGTF requirements (see fig. 2-3). The topographic platoon and IIP work closely as both use many of the same baseline intelligence data and sources for production.
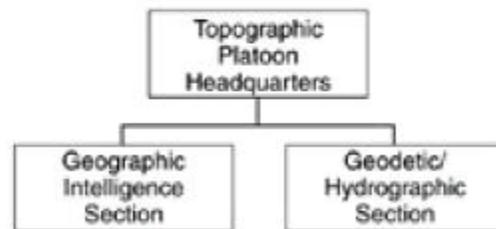
Figure 2-3. Topographic Platoon Organization.

The topographic platoon personnel—

● Integrate, deconflict, analyze, and disseminate theater, Service, and national geospatial data bases for the MAGTF.

● Provide GEOINT and specialized mapping, graphics and other geospatial information and services, and GEOINT products in support of P&A cell all-source intelligence products.

● Provide key support to the IPB process.

● Produce independent GEOINT studies in response to separate requirements.

CI/HUMINT Company

Organized under the intel bn, the CI/HUMINT company is responsible for the development and maintenance of the MEF CI estimate and reporting information (see fig. 2-4). The CI/HUMINT company produces—

● Intelligence derived from human source exploitation, to include—
  ■ Interrogations of enemy prisoners of war, refugees, and displaced persons.
  ■ Counterintelligence operations.
  ■ Human source operations.
● Intelligence derived from exploitation of captured documents or materiel.
● Specialized CI or force protection assessments in support of P&A cell production or in response to specific IPRs.
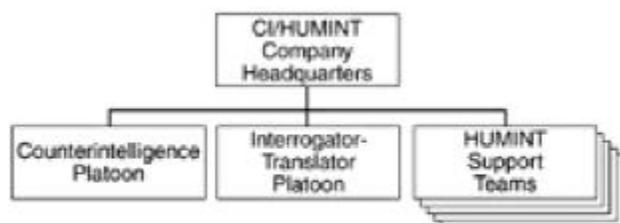
Figure 2-4. CI/HUMINT Company Organization.

Radio Battalion Operational Control and Analysis Center

The radio battalion operational control and analysis center (OCAC) provides the principal MEF SIGINT analytical and production support to MEF IRs. Under staff cognizance of the ISC, the radio battalion is tasked with the responsibility of maintaining the MAGTF electronic OOB and SIGINT data bases and of providing SIGINT analytical and production support to the P&A cell. The OCAC provides MAGTF units with time-sensitive SIGINT and product report-ing based on intelligence reporting criteria and the MAGTF intelligence dissemination plan.

VMAQ

In conjunction with the MAW G-2, VMAQ is responsible for the processing, analysis, and production of routine and time-sensitive electronic intelligence reports resulting from EA-6B operations. The resulting information and intelligence is used to help update and maintain the threat electronic OOB, which is used in the planning and execution of aviation and other MAGTF operations. A threat's electronic OOB and the location of electronic emitters in the battlespace are important indicators of threat dispositions, capabilities, and intentions.

Force Reconnaissance Company

The mission of the force reconnaissance company is to conduct amphibious reconnaissance, surveillance, and limited-scale raids in support of the MEF, other MAGTFs, or JTFs as directed.

Under the staff cognizance of the ISC, force reconnaissance company conducts specialized terrain reconnaissance and prepares intelligence products to support hydrographic, beach, road, bridge, route, urban area, helicopter landing zones (HLZs), drop zones (DZs), landing craft air cushion (LCAC) landing zones (LZs), and aircraft forward operating site intelligence studies.

Principal Staff Officers

Like the commander, the other principal staff officers play an important role in intelligence P&A. Through development of focused intelligence requirements, and recommending which should be priority intelligence requirements PIRs, they assist in directing the intelligence P&A effort. They also assist the analytical effort by availing the wide range of skills and backgrounds resident within their staff sections to the intelligence section. A tremendous synergism is achieved when

task-organized teams of intelligence analysts and other occupational specialists form to analyze a specific issue. Likewise, a key component to effective wargaming is a red cell, which has experts in various warfighting functions thinking and fighting like the threat. Principal staff officers must—

- Use the intelligence products.
- Evaluate the worth and effectiveness of those products.
- Provide constructive feedback.
- Develop IRs and recommend their priority.

Unit Intelligence Officer

The intelligence officer manages the intelligence effort for the commander by implementing activities that execute the intelligence P&A function for the command. Understanding the scope and rationale behind the commander's decisionmaking process enables the intelligence officer to anticipate future requirements and properly focus the P&A effort. To execute P&A responsibilities, the intelligence officer must—

- Integrate and focus all-source intelligence on the commander's and sub-ordinate commanders' PIRs to support estimates of the situation, situation development, COA development, planning, and decisionmaking.
- Supervise the development and dissemination of all-source intelligence products that are tailored to the units' needs and concepts of operations and that are provided in time to support planning and decisionmaking.
- Provide the commander and staff with a bottom-line analysis of enemy capabilities, strengths, and vulnerabilities as well as opportunities and limitations presented by the environment.
- Request P&A support for requirements that exceed organic capabilities.
- Ensure the nature of the analytical effort and the content of the intelligence product is

understood and properly used in the planning and execution of combat operations.

Organic Intelligence Sections

The unit intelligence section supports the commander, the intelligence officer, and the command through the development of mission-oriented intelligence products. The analytical and production capabilities of organic intelligence sections vary with the size of the section and level or type of command it supports. However, intelligence sections and their supporting intel bn or detachment are capable of performing the following P&A tasks:

- Conducting mission-focused IPB P&A for the unit's AO and AOI.
- Developing and maintaining a comprehensive intelligence estimate.
- Tailoring intelligence products to meet unit requirements.
- Maintaining an accurate all-source picture of the enemy situation in the AO and AOI.
- Preparing target analysis and target intelligence products.
- Providing intelligence operational linkage and communications and information system connectivity with higher, adjacent, supporting, and subordinate analytical elements.

Organization for Employment

When deployed, the P&A cell functions as part of the MEF CE combat intelligence center (CIC), IOC, under C2 of the ISC.

Combat Intelligence Center

The MEF CE CIC is the overarching IOC, which is established within the MEF main command post to conduct the primary functions of MEF intelligence section and intel bn. Key CIC elements (see table 2-2) are designed to

provide tailored, yet flexible, intelligence C2 and functional capabilities to meet MEF and subordinate commander's IRs and supporting intelligence and reconnaissance operations.

Command and Control

The MEF AC/S G-2 focuses on overall C2 and direction of MEF intelligence, CI, and reconnaissance operations by exercising staff cognizance over intel bn, radio battalion, force reconnaissance company, and other MEF intelligence and reconnaissance assets (e.g., UAV squadron). Within this C2 authority, the intel bn commander, serving as the G-2's ISC, performs MEF-wide IR management; develops, integrates, and manages supporting intelligence plans; and supervises plan execution.

These plans encompass the MEF-wide organic efforts for collection, processing, production, and dissemination activities of intelligence and reconnaissance operations. The intel bn commander/ISC is responsible for the establishment and operation of the IOC (see fig. 2-5 on page 2-10).

Table 2-2. MEF CE's CIC Key Elements.

Element	Responsibilities
G-2 Plans	Serves as the G-2 section's main element for coordinating and providing intelligence support to the MEF CE future plans team and leadership and direction of the G-2 section's imagery and mapping, SIGINT, and weather sections.
G-2 Operations	Serves as the G-2 section's main element for coordinating and providing intelligence support to the MEF CE commanding general (CG), battle staff, and current operations center elements; target intelligence support to the force fires and future operations; G-2 section intelligence requirements management activities; red cell support; and MEF intelligence liaison with external commands and organizations.
IOC	Serves as the principal MEF intelligence operations and C2 center that is established by intel bn; performs intelligence requirements management, staff cognizance of ongoing organic and supporting collection operations, intelligence P&A, and intelligence dissemination.
● Support Cell	Serves as primary element for conducting MEF-wide intelligence requirements management, weather support, collections and dissemination planning and direction, and intelligence staff cognizance of MEF organic and supporting intelligence and reconnaissance operations.
● P&A Cell	Serves as the primary P&A element of the MEF; processes and produces all-source intelligence products in response to requirements of the MEF; serves as the principal IMINT and GEOINT production element of the MEF.
● SARC	Serves as the primary element for the supervision of MEF collection operations; directs, coordinates, and monitors intelligence collection operations conducted by organic, attached, and direct support collection assets.
CI/HUMINT Company Command Post	Serves as the primary element for conducting CI/HUMINT planning and direction, C2, and coordination of MEF CI/HUMINT operations with external CI/HUMINT organizations.
OCAC	Serves as the main node for the C2 of radio battalion SIGINT operations and the overall coordination of MEF SIGINT operations; processes, analyzes, produces, and disseminates SIGINT-derived information; and directs the ground-based electronic warfare activities of the radio battalion.
Reconnaissance Operations Center	Serves as the main node for the C2 of force reconnaissance company's operations and the overall coordination of MEF ground reconnaissance operations; processes, analyzes, produces, and disseminates ground reconnaissance-derived information in support of MEF intelligence requirements.
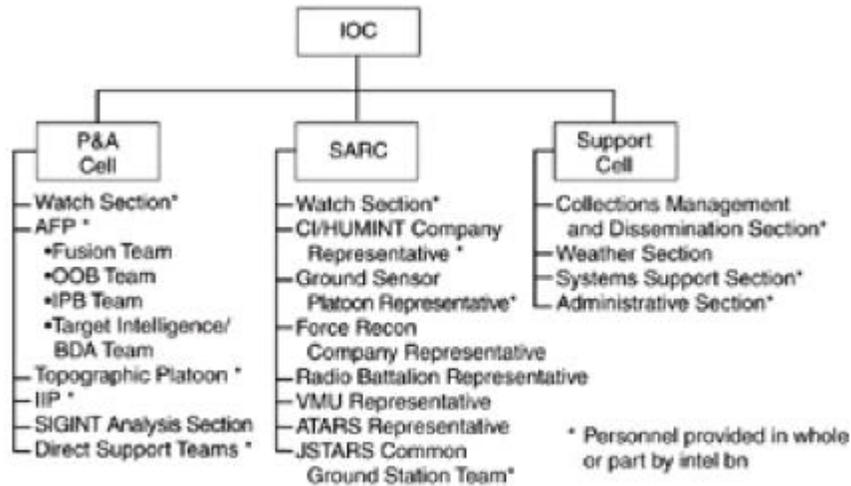
Figure 2-5. IOC Organization.

Senior Marine Expeditionary Force Intelligence Staff Officers

Table 2-3 highlights the key MEF senior intelligence staff officers and their responsibilities, roles, and tasks.

Intelligence Production Support Flow

Requests for intelligence production support from the P&A cell, or other MEF intelligence or reconnaissance elements, must be validated and forwarded via the chain of command to the MEF G-2 for validation, prioritization, and tasking. The intel bn commander, serving as ISC, performs this function for the G-2.

The ISC, upon approval by the AC/S G-2, uses the prioritized intelligence collection requirements (ICRs), IPRs, and intelligence dissemination requirements (IDRs) for planning and direction, follow-on taskings to MEF organic and supporting intelligence and reconnaissance units, C2, and execution. The ISC's overall intelligence production staff cognizance relationships and resulting P&A cell intelligence production support flow are as indicated in figure 2-6.

Organization for Combat Operations

The intel bn and P&A company tailor day-to-day garrison operations to support the IRs of the commander, staff, and MEF subordinate units. With minor adjustments, the P&A company transitions from garrison pre-hostilities organization to P&A cell crisis or combat operations functioning. In practice, the organization of the P&A cell supporting each MEF is based on prospective missions of that MEF and corresponding potential AOs.

During contingency or combat operations, the P&A cell functions as part of the MEF CE's CIC and the intel bn's IOC. The P&A cell may be tasked to provide limited personnel support to an intelligence node or cell with the MEF. In such cases, the intelligence component of these command echelons will contain a limited P&A capability (focused on providing the commander with situational awareness).

Table 2-3. Senior Intelligence Staff Officers.

ISC	G-2 Operations Officer	G-2 Plans Officer
Planning and execution of intelligence operations to support all MEF IRs.	Providing intelligence support to MEF CE battle staff and current operations center agencies.	Providing intelligence support to the plans officer's future planning team for future planning IRs.
Establishing and directing the IOC (P&A cell, SARC, and support cell).	Coordinating intelligence support to higher and adjacent headquarters and agencies.	Recommending IR validation, prioritization, and tasking to AC/S G-2.
Managing IRs (collection, production, and dissemination), validating, prioritizing, and tasking IRs, per AC/S G-2 direction.	Recommending IR validation, prioritization, and tasking to AC/S G-2.	Establishing and directing the G-2 future planning intelligence element.
Exercising C2 of intel bn and staff cognizance over SIGINT, CI, HUMINT, measurement and signature intelligence, IMINT, and air and ground reconnaissance, including staff cognizance of designated G-2 elements.	Establishing and directing intelligence elements and support to the combat operations center, future operations center, target intelligence section, force fires, red cell, and MEF intelligence liaison teams.	Establishing and operating the intelligence section's imagery and mapping, CI, HUMINT, SIGINT, and weather sections (less that under staff cognizance of the ISC).
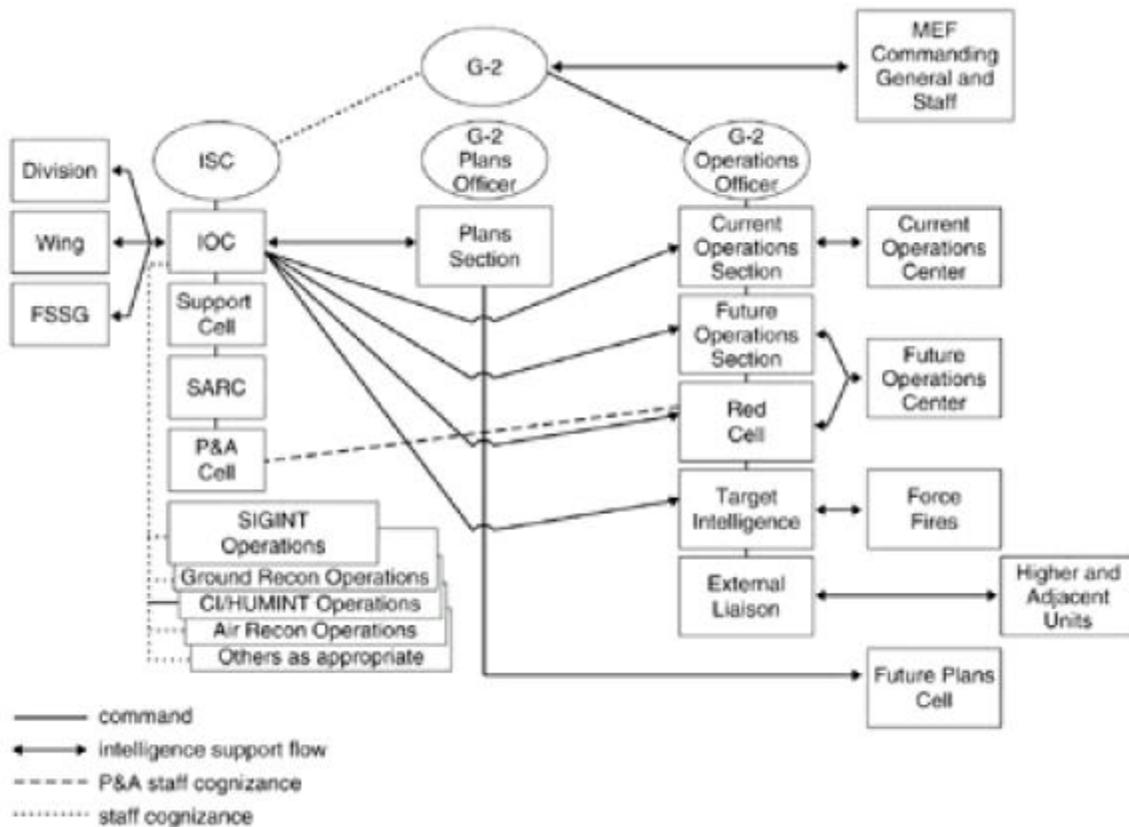
Figure 2-6. C2 and Staff Cognizance of Intelligence Production Support Flow.

The P&A cell may be tasked to provide personnel to support intel bn detachments provided to subordinate commands, MAGTFs, or separate units. Each P&A cell contains within its table of organization (T/O) two direct support teams which can be used to augment the IR management, analysis, production, and dissemination capabilities of the supported unit. Direct support teams can be employed by the MEF AC/S G-2 or ISC to focus intelligence planning, direction, analysis, production, and dissemination support to the main effort or other specified MEF priority. When not so assigned, direct support teams will be integrated within other P&A cell or intel bn operations.

When a MAGTF of less than full MEF size is deployed, the P&A cell may contribute personnel to a task-organized intel bn detachment normally attached to the MAGTF or special-purpose MAGTF (SPMAGTF) command element. A common example would be the detachments provided to Marine expeditionary unit (special operations capable) (MEU[SOC]) CEs. Standing support includes small detachments from the IIP and topographic platoon. The lead and tactical echelons' intelligence nodes and detachments rely heavily on electronic CIS connectivity to allow reach back to the more robust and capable analytical and production resources of the MEF and intel bn.

Communications and Information Systems

The intel bn, P&A cell, subordinate elements, and other key intelligence producers (e.g., radio battalion) must have sufficient communications resources to support internal C2, operations, and IR support. Communications capabilities generally consist of short- and medium-range voice communications equipment. The communications battalion or communications elements provide P&A CIS support beyond the basic requirements.

Basic Requirements

Regardless of the size of the MAGTF, the following standing CIS requirements must be satisfied to facilitate intelligence P&A operations.

Capability to Command and Control Subordinate Units

Intelligence officers and intelligence production element commanders or officers in charge must be capable of positive staff cognizance or C2 of subordinate units and integration of their operations with broader MAGTF and external intelligence and operations C2. Traditionally, single-channel radio and record message traffic have been used to support MAGTF intelligence units' C2, particularly at echelons below the MSC level. At MSC, major subordinate element (MSE), MAGTF CE, and higher command echelons, high capacity communications networks support intelligence production C2, operations, and product dissemination. In semi-static situations, secure electronic mail or telephone provide significant communications capabilities; in highly fluid or mobile scenarios, cellular, satellite communications (SATCOM), and very high frequency (VHF) and high frequency (HF) radios may be used.

Ability to Receive Collected Data, Information, and Intelligence from Organic and External Intelligence Organizations and Production Elements

The CIS architecture must provide connectivity between organic and supporting intelligence units and production elements. Principal and alternate means of CIS are dependent on mission, enemy, terrain and weather, troops and support available-time available (METT-T) factors. The commanders and users' desired product formats also influence the selection of CIS means. The means of communication must include the capability to transmit imagery, GEOINT, and other intelligence products with large data files as well as the capability to

disseminate IMINT and reports digitally via fiber optics, wire, radio, and voice formats.

Ability to Provide Intelligence to Supported Commanders

Supported commanders' intents, concepts of operations and intelligence, command relationships, and standing PIRs and IRs influence intelligence production CIS requirements. The CIS architecture must be capable of integrating production elements' C2 and supporting CIS operations, including general service (GENSER) and sensitive compartmented information (SCI) communications with the primary CIS channels used by supported commanders. The determination of principal and alternate CIS means depends on METT-T. The product format desired by commanders and intelligence users also influences the CIS means. The means of communication must include the capability to transmit imagery, GEOINT, and other intelligence products with large data files as well as the capability to disseminate SCI and GENSER all-source and intelligence discipline-unique reports digitally via fiber optics, wire, radio, and voice formats.

Ability to Share Intelligence Products and Reports with All-Source JTF, Other Components, Theater, National, and Multi-national Intelligence Organizations, Agencies, and Centers

Traditionally, MAGTF GENSER secure record and voice communications provide this capability. While these techniques continue to be used for MAGTF intelligence production, they are now secondary in importance to the use of Joint Worldwide Intelligence Communications System (JWICS), SECRET Internet Protocol Router Network (SIPRNET), and other CIS

capabilities which allow participants to access each others' intelligence products and data bases and to immediately pull required data, intelligence, and other products. This CIS requirement includes the capability to disseminate intelligence with designated nongovernmental organizations (NGOs), private volunteer organizations (PVOs), and other U.S. and multinational governmental agencies, particularly during military operations other than war (MOOTW).

Information Systems

Information systems, such as the intelligence analysis system (IAS), and their associated networks are the lifeblood and lifelines of P&A cell and MAGTF intelligence analysis, production, and dissemination operations. Intel bn has sufficient information systems resources to satisfy internal C2, operations, and intelligence needs. Most information systems require access to SIPRNET for GENSER requirements and to JWICS for SCI requirements, which provide intelligence and data base access to MAGTF, JTF, and other components' elements, and theater and national intelligence reporting and data bases.

The nonsecure internet protocol router network (NIPRNET) is also a key resource for intelligence analyst research and access to public domain information, as well as a means to exchange unclassified information. The supporting MEF communications battalions provide the necessary network connectivity for GENSER information networks and communications pathways, and radio battalion provides SCI networks. Figure 2-7 on page 2-14 depicts a notional MEF intelligence processing, analysis, production, and dissemination CIS architecture and resources.
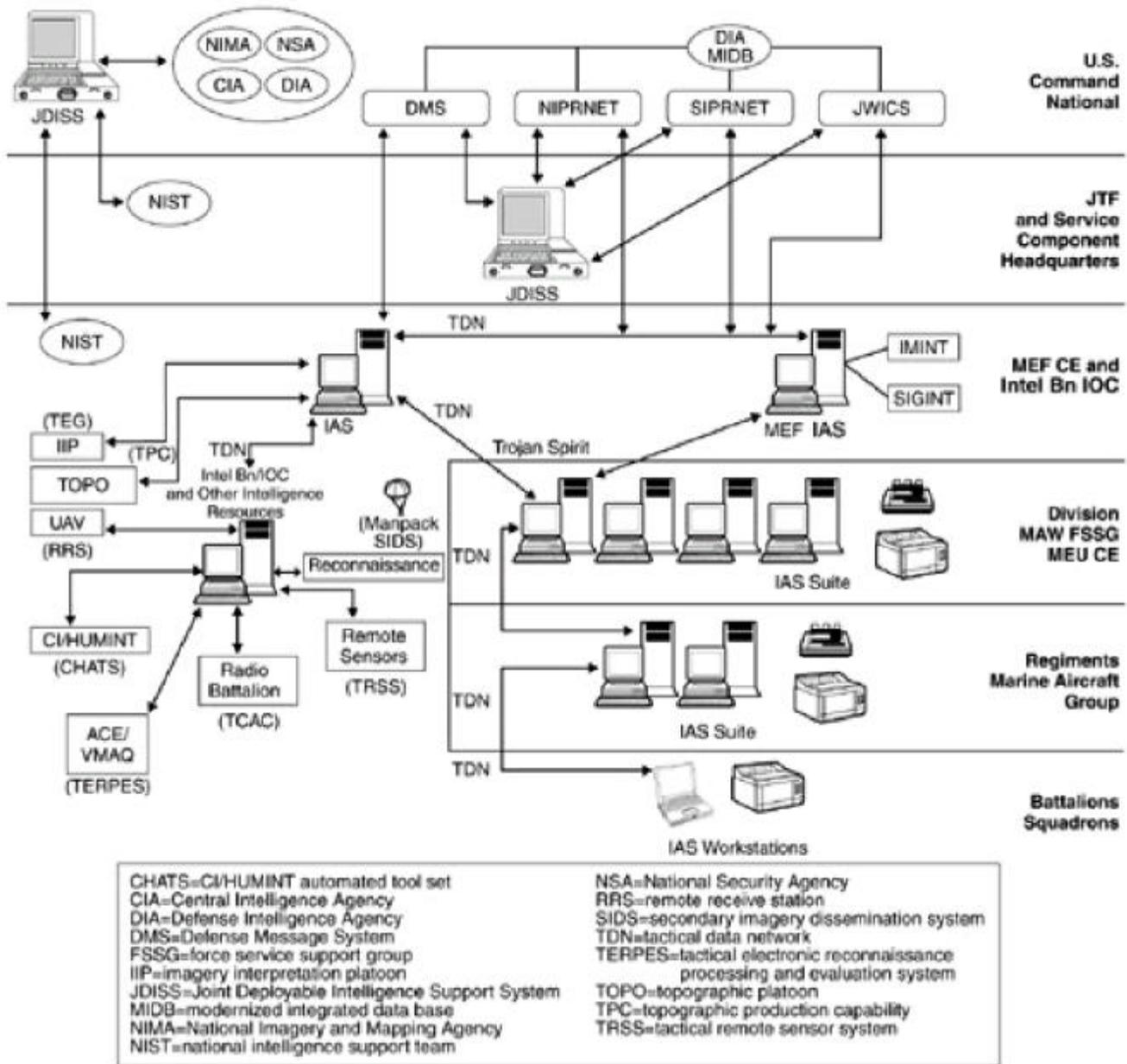
Figure 2-7. Notional MEF CIS Architecture.

CHATS=CI/HUMINT automated tool set
CIA=Central Intelligence Agency
DIA=Defense Intelligence Agency
DMS=Defense Message System
FSSG=force service support group
IIP=imagery interpretation platoon
JDISS=Joint Deployable Intelligence Support System
MIDB=modernized integrated data base
NIMA=National Imagery and Mapping Agency
NIST=national intelligence support team

NSA=National Security Agency
RRS=remote receive station
SIDS=secondary imagery dissemination system
TDN=tactical data network
TERPES=tactical electronic reconnaissance
 processing and evaluation system
TOPO=topographic platoon
TPC=topographic production capability
TRSS=tactical remote sensor system

CHAPTER 3. FILTERING, RECORDING, AND EVALUATING

When preparing information for analysis, intelligence personnel—

- Identify Information of Immediate Tactical Value. Every piece of data, information, or intelligence received must be assessed to determine its tactical value and its effect on current operations. Particular attention must be paid to possible alarms, triggers, and high-payoff targets (HPTs), which are defined by, and tied to, the PIRs, commander's decision support tools, and targeting priorities. If the information is relevant to ongoing operations, immediate production is initiated. The information is rapidly evaluated, analyzed, and disseminated for use by the commander and staff as well as subordinate and other affected units.

- Eliminate Redundant and Irrelevant Data Early in Processing. Each item received must be scrutinized to determine its pertinence to the unit's intelligence requirements. The incoming flow of data, information, and intelligence must be filtered for redundancy and relevance to the mission, AOI, and timeliness. This ensures intelligence analysts receive information and data that is useful to the analytical process while not being overwhelmed with unnecessary information or repetitive reporting.

- Identify Relevance to Ongoing Production. An important aspect of preparing an item for analysis is determining its impact on the ongoing intelligence production effort. The received data or information is evaluated to identify how it

contributes to ongoing production in order to determine who should get the information, how urgent the information is, and in what format the information should be provided.

- Practice Standing Operating Procedures. The employment of information handling standing operating procedures (SOPs) saves time and effort. Standard methods of filtering, collating, recording, and evaluating speed up the preparation of incoming items for analysis, provide consistency in the way information is handled, and enhance comprehension of personnel performing the procedures and of the analysts receiving the incoming items.

- Employ Reliable and Accessible Recording Tools. Effective analysis depends in part on the ability to access, recall, and manipulate the stream of all-source data, information, and intelligence flowing into the command. Recording methods should be simple and flexible without interfering with timely analysis, production, dissemination, and use of intelligence. Analysts must be able to access information when they need it to receive the information in a form that facilitates understanding, and to rapidly integrate the data with other information or intelligence. The widespread use of automated information systems enhances the speed and utility of intelligence recording tools. However, analysts must ensure the necessary reliability and accessibility are built into the automated information systems and that associated backup procedures are established.

SECTION I. FILTERING

Filtering is the discarding of irrelevant or repetitive information prior to its entering the P&A process. Because current and emerging collection, communications, and intelligence automated information systems provide access to a vast quantity of raw data, processed information, and finished intelligence, there is significant potential for information overload of intelligence

sections and personnel. An effective filtering system is essential for managing the flow of data, information, and intelligence into the unit's intelligence processing and production system.

Filtering Criteria

Before information is entered into the production process, each item's relevance to the unit's intelligence requirements is assessed and unrelated material is discarded. The unit intelligence officer establishes basic criteria for filtering. Critical criteria drive the establishment of PIRs and IRs. The filtering criteria must be reviewed on a regular basis and updated to reflect changes in intelligence requirements, the AOI, and timeliness of information needed. Intelligence analysts use the following criteria when making assessments.

Subject Matter

The content of the data or report must be related to the unit's PIRs/IRs. Information that has no bearing on the PIRs/IRs is discarded, unless the information may impact future requirements.

Location

The event detailed in the data or report must have occurred within the unit's AO or AOI.

Time of Occurrence

The report should have continuing significance. For example, reports of future air or missile strikes may be received after the strike has begun; such reports are discarded unless they contain details of analytical importance.

Redundancy

Multiple reports relating to the same data or event are often received. Reports that repeat the initial information without adding significant data or

analysis should be discarded, unless the reports provide critical confirmatory information.

Methodology

Filtering should occur as early as possible in the information processing system. Despite the fielding of automated intelligence systems, such as the Marine Corps IAS and the technical control and analysis center (TCAC), filtering is largely a manual process. A human must review voice reports, translated documents, images, and finished intelligence documents from higher echelons.

Manual Filtering

Most intelligence sections establish a central point for the receipt and distribution of incoming intelligence, counterintelligence, and reconnaissance reports. Normally, the intelligence watch within the combat operations center or the surveillance and reconnaissance cell is the receiving and distribution point. The watch examines each piece of data, information, and intelligence received; compares the content to the filtering criteria; and decides whether to discard the report. Filtering personnel must be able to rapidly identify new intelligence information of immediate tactical value and to quickly initiate the necessary actions.

Automated Filtering

For machine-readable formatted messages, automated intelligence systems are significant filtering tools. Systems such as the IAS can automatically filter incoming messages according to specified parameters such as location, time, and type of report. Use of IAS speeds the filtering process by correlating incoming information to existing units' tracks within the data base. However, the unit name or identification and location data fields in the formatted message must be filled out for this automatic function to occur, or the system will hold the message for

manual correlation. Automated systems are a tool to assist the analyst, not replace them. The system operator must continually review the filtering parameters and assess the effectiveness of the information filtering system. As with manual filtering, IAS operators must be familiar with the unit's intelligence requirements, have situational awareness, and exercise sound judgment.

SECTION II. RECORDING

Recording is the reduction of information to written or other graphical representation and the arranging of this information into groups of related items. This step is performed so items of information can be observed as an integrated picture and studied in relation to each other. Recording information makes evaluation and analysis easier and helps prepare intelligence products by drawing together available information on a specific subject. It also provides a record of events for post-operation study of the enemy and AO.

Methodology

Recording performed by intelligence sections at all levels normally involves—

- Registering all incoming information.
- Logging, map or chart marking, filing and indexing, or entering information in the data base of an automated system.
- Maintaining a system designed for rapid and efficient operations.

At lower command echelons, especially during mobile operations, recording may be no more than the maintenance of a log and marked map. At higher command echelons, recording relies heavily on automated information systems, electronic data bases, and visual display units. Both methods should make full use of graphic recording tools (i.e., maps, overlays, graphs, and charts) that make it possible to visualize and absorb the maximum amount of information in the shortest possible time. The indexing and categorizing of subject matter in a recording system must be related to the projected area, scope, and nature of the operations and must be based on the—

- Commander's PIRs.
- Other IRs.
- Anticipated information flow.

The recording means must be able to handle the volume of information and intelligence received and to serve the needs of individuals requiring access to that information. In addition, recording means and techniques must permit timely dissemination of information and intelligence.

In the past, most recording was manually generated either on a map, journal, or status board. Today, the most common recording devices are automated data processing and information systems such as IAS. Office automation software allows the rapid creation of charts and graphs, the annotation and manipulation of images, and the rapid assembly of words and text. Intelligence journals, files, records, and data bases can be updated automatically, and the data can be recalled and displayed in an overlay form.

Recording Tools

Whether operating in a manual or automated environment, the most common types of recording tools used by the intelligence analyst are the intelligence journal, enemy situation map, intelligence workbook, order of battle or analyst files, and target files.

Intelligence Journal

The intelligence journal is an official, perma-
nent, and chronological record of reports and
messages that have been received and transmit-
ted, of important events that have occurred,
and of response actions taken (see fig. 3-1).
Messages are place in the journal file in the
numerical order of the journal entry number.
The journal, besides providing a brief chrono-
logical account of events, serves as an index to
the journal file. The journal covers a stated
period, normally 24 hours. Each item entered
in the journal normally contains—

● An entry number, which is assigned to an
incoming message and is recorded on the
message.

● The time the information was sent, received,
or noted.

● The message date-time group.

Figure 3-1. Example of an Intelligence Journal Page.

- The originating agency or addressee.
- A brief description of the item.
- The disposition information.

Enemy Situation Map

The enemy situation map is a temporary graphic display of current enemy dispositions, major enemy activities, and other pertinent intelligence and information. By presenting that information in relation to each other, the enemy situation map also helps with interpretation, analysis, and decisionmaking. In addition, it helps dissemination by permitting the ready transfer of intelligence concerning enemy forces capable of interfering with the mission of the unit concerned. A primary analytical tool, the enemy situation map is often the only recording device used during fast-moving combat operations, particularly at lower command echelons.

Methodology

The enemy situation map should cover enough area to facilitate the conduct of current operations and the planning of future operations. A large MAGTF, such as a MEF, normally requires the following three enemy situation maps:

- Large-scale tactical map (approximately 1:50,000) for current ground operations.
- Medium-scale operational map (approximately 1:250,000) covering the AO and portions of the AOI to record deep enemy installations (e.g., airfields, missile sites) and enemy forces that can affect friendly operations.
- Small-scale strategic map (approximately 1:1,000,000 or smaller) to cover the MAGTF AOI and beyond.

At lower echelons, one map may suffice. The scale depends on the mission and threat. The map scale(s) used should be decided between the G-2/S-2 and the G-3/S-3 when the battlespace is defined (step one of the IPB process). Often, a combined G-2/G-3 map is

used to conserve space in the combat operations center or other C2 cells. If separate intelligence and operations maps are maintained, overlays must be readily interchangeable between maps. Information displayed on the situation map must be tailored to the—

- Mission.
- Nature of the threat or enemy.
- Terrain.
- Command echelon being supported.
- Unit's PIRs/IRs.
- Force protection.
- Targeting priorities.

Generally, enemy maneuver units posted on the situation map are two echelons below that of the friendly unit. Enemy units, regardless of size, in friendly rear areas are always posted because of the amount of damage they can inflict on C2 and sustainment. The situation map reflects—

- Enemy unit identification, disposition, and boundaries.
- Significant terrain and infrastructure features.
- Locations of manmade and natural obstacles.

When plotting enemy activities and dispositions, intelligence personnel—

- Indicate the latest time when the activity was observed or the disposition was confirmed.
- Post information using standard military symbols and abbreviations. See Field Manual (FM) 101-5-1/Marine Corps Reference Publication (MCRP) 5-2A, *Operational Terms and Graphics*, for standard symbology.
- Explain any deviations from these symbols in the marginal data on the map or overlay.
- Mark maps and overlays clearly with the appropriate classification.

Information is posted on the situation map as it is received. Information is removed promptly when

no longer current, because omissions or outdated information may result in erroneous evaluations, interpretation, and decisions. On a hard copy situation map, separate flaps of acetate can be used to record different types of information, which reduces overcrowding. Also, to reduce overcrowding, a number or letter system can be used to record significant events or activity. The letter or number is marked at the appropriate location on the map where the activity occurred. On a board or marginal area alongside the map, the same letter or number is recorded with a notation of the activity observed. A numbering system that is easily cross-indexed to the journal or message file should be used.

Automation

Automated functions of the IAS and other intelligence information systems greatly assist the maintenance of an enemy situation map. The IAS enables the operator to—

- Zoom in and out through various maps to quickly change scale views of the battlefield, thereby enhancing the number, size, and types of enemy units displayed.
- Call up information, including last report and location, by clicking on the unit of interest.
- Forward electronic overlays to other IAS users or to systems such as tactical combat operations for display.
- Use large-screen displays to deliver information briefings.
- Share a common picture of the battlespace in near-real time with users at separate locations by using robust communications connectivity. Consideration must be given to developing manual and electronic backups in the event of catastrophic failure of the system.

Intelligence Workbook

Incoming information is recorded by subject in the intelligence workbook for ready reference

and comparison. The workbook helps in determining the meaning and significance of related items of information, which facilitates further processing, production, and dissemination (i.e., preparation of intelligence summaries and reports). The workbook can be set up in any format; however, the most common format organizes the book according to topics in the intelligence summary.

As information is received, it is recorded in one or more parts of the workbook based on its content. For example, a report concerning a newly identified enemy armor unit could be recorded under the new units section as well as in the armor section. Each entry should include—

- Journal entry number for the source report.
- Time of the event or observation.
- Location.
- Brief extract of the information applicable to the workbook section.

Maintaining the workbook is a time-intensive, manpower effort, but a properly maintained workbook is a powerful analysis tool. The IAS operator has the ability to simultaneously break down portions of incoming messages into numerous sections of an electronic data base or workbook. Employed properly, this capability can significantly streamline the maintenance of an intelligence workbook.

Order of Battle Files

OOB files include information and intelligence on the identification, strength, command structure, and disposition of personnel, units, and equipment of a military force. Combined with information on the threat, terrain, and weather, OOB information is a key element in the creation of finished intelligence products (e.g., IPB, estimates, BDA).

OOB files maintained on threat, allied, and neutral or third party forces can be subdivided into—

● Ground OOB.

● Air OOB.

● Naval OOB.

● Electronic OOB.

● Weapons of mass destruction.

● Other categories tailored to the unit's needs.

The OOB subdivisions and level of detail maintained in each subdivision depends on the—

● Command level where the analysis takes place.

● Type of threat forces that can influence friendly operations.

● Mission assigned.

● Area of responsibility.

A MEF conducting an amphibious operation needs to maintain information on all types of forces, while a battalion or squadron operating as part of sustained operations ashore focuses on the ground or air OOB that most affect them. The battalion or squadron relies on higher, adjacent, supporting, or Service commands in the theater to provide other OOB (e.g., weapons of mass destruction, electronic OOB, naval OOB). Specific factors are evaluated for each type of OOB (see chapter 7 for a detailed discussion of these factors).

Lower command echelons' OOB analysis is generally more focused, less detailed, immediate in nature, and performed by the unit's intelligence personnel as part of their general duties. At higher levels, particularly at a MEF or MAGTF CE, one or more analysts are assigned to each type of OOB. At these levels, OOB information normally becomes voluminous in a short period of time. In organizing this information, OOB analysts must maintain extensive and systematic compilations and filing systems. Specific items of information and intelligence must be located on

short notice and incorporated into comprehensive reports or analyses. Regardless of the level of command, analysts at the tactical intelligence level use several OOB tools.

Unit Workbook

The format for the unit workbook depends on the structure of the enemy force being monitored. It consists of a collection of unit worksheets arranged by type of unit or in numerical sequence. Analysts with OOB baseline documents at their disposal use them as unit workbooks by inserting additional pages as new information is received. Normally, the parent unit listed on the unit worksheet is equivalent in size to the level of command performing the analysis. Records are maintained on units one level above and two levels below the enemy unit being monitored; however, this can be modified based on the situation. The date and the source of information are recorded for each entry (see fig. 3-2 on page 3-8). Unit OOB details noted in the remarks column include—

● Reports of branch insignia.

● Number and types of weapons.

● Local residents' statements in abbreviated form.

OOB Situation Overlay

This is a graphic portrayal of current confirmed or unconfirmed enemy OOB. It shows identification and disposition of enemy units and other information that will assist in developing the enemy OOB. Enemy units, down to and including two echelons below the analyst's own level of command, are plotted using the standard symbols included in FM 101-5/MCRP 5-2A.

Peculiarities of enemy organizations, the tactical situation, and time and personnel available determine what to plot or omit on OOB maps. The information time and date are entered below each plotted symbol.

| Parent Unit _____ | | | | | | |
Subordinate Units	City	Coordinates	Installation	Personalities	Identification or Code No.	Remarks
Division Headquarters	Stein	PV818147	1 and 3	Commander Col Crechin		EPW no. 26, captured 2 Feb 68
96th Mechanized Rifle Regiment	Delltach	PU820934	4	Commander Col Kurshave	16181	Document captured 19 Mar 68
145th Mechanized Rifle Regiment	Ellenburg	PU852961	2	LtCol Shrenko	16182	Deserter 21 Mar 88
3d Battalion	Gladbach	PV891024	1			Gladbach residents report battalion subordinate to headquarters in Ellenburg, 3 Feb 88
43d Medical Tank Regiment	Linburg	PV863106	3	Commander Col Reshvic		Agent report 26 May 68
358th Transportation Battalion	Lehrt	PV825158	1		16195	OOB Bank

Figure 3-2. Example of a Unit Workbook Page.

An OOB situation map caption box contains annotated information that helps explain the OOB situation. Normally, the three types of caption boxes are: strength, unlocated units, and legend. At lower tactical echelons, the OOB situation overlay and the enemy situation map are combined for simplicity. At higher echelons, applicable analysts maintain separate types of OOB on overlays near their work area. A composite OOB overlay is used for the enemy situation map and for briefings (see fig. 3-3). The IAS allows the rapid generation of tailored electronic overlays based on available data base information.

OOB Record

As referenced in Standardization Agreement (North Atlantic Treaty Organization [NATO]) (STANAG) 2077, *Orders of Battle*, OOB record files are used to maintain accurate and complete data on all units. Normally, one record is maintained on each threat unit in a position to affect current or future operations (see fig. 3-4 on page 3-10). The OOB record contains the following information:

- Service (branch of armed forces to which the unit belongs, including paramilitary and insurgent).
- Formation or unit name (official title).
- Alternative name (unofficial name).
- Role (principal function of the unit, e.g., command, combat, combat service support [CSS]).
- Superior formation (immediate senior formation or unit).
- Headquarters location name (nearest identifiable town or village).
- Headquarters location coordinates (universal transverse mercator [UTM] and latitude and longitude).

Located Units (by type)			Unlocated Units
Committed Forces			Recon Bn, 38th GMR Div
Unit	No.	Weapon	114th Tk Regt, 38th GMR Div
Mech Bn	6		UI Ind Tk Bn, 38th GMR Div
Tk Bn	2	80 T-64	SSM Bn, 38th GMR Div
Reinforcement			
Tk Regt	1	94 T-64	
Ind Tk Bn	1	51 T-64	
Fire Support			
SSM Bn	1	SS-21	
Arty Bn	8	18xBM-21 MRL	
		18x152mm SP How	
		72x122mm How	
		36x122mm SP How	
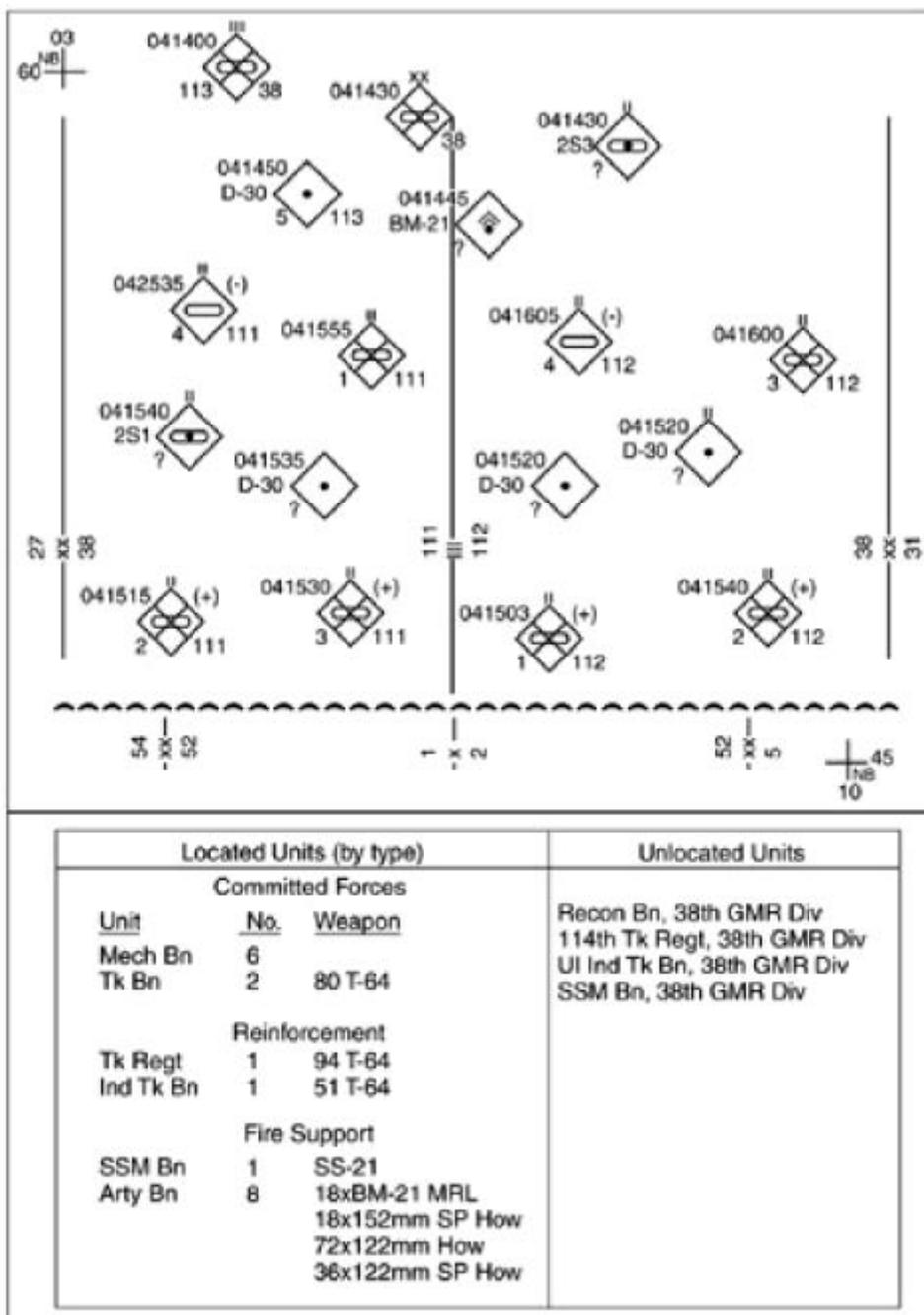
Arty=artillery
Bn=battalion
Div=division
GMR=guard motorized
How=howitzer
Ind=Independent
Mech=mechanized
mm=millimeter

MRL=multiple rocket launcher
Recon=reconnassiance
Regt=regiment
SP=self-propelled
SS=surface-to-surface
SSM=surface-to-surface missile
Tk=tank
UI=unidentified

Figure 3-3. Example of OOB Overlay.

PARENT FORMATION									
Service		Formation or Unit Name		Alternative Name		Role		Superior Formation	
HQ Location Name		HQ Location Coordinates		Combat Effectiveness		Allegiance		Commander's Last Name	
SUBORDINATE FORMATIONS/UNITS									
Serial Number	Subordinate Unit or Formation Name	Location Coordinates	Role	Signature Equipment	Equipment Quantity	Commander's Last Name	Personnel Strength	Combat Effectiveness	Record Date/Update
Record Evaluation and Source					Remarks				

Figure 3-4. Sample OOB Record.

- Combat effectiveness assessment (ability to perform intended mission or function expressed in a percentage).
- Allegiance (entity or country to which unit owes its loyalty).
- Commander's last name.
- Subordinate formations' and units'—
  - Serial number.
  - Subordinate unit name.
  - Location coordinates (UTM and latitude and longitude).
  - Role.
  - Signature equipment (equipment that might identify the unit).
  - Equipment quantity (number of signature equipment in the unit).
  - Commander's last name.
  - Personnel strength (assessed strength).
  - Combat effectiveness.
  - Record date and update (date of information or last time record was updated whichever is later).
  - Record evaluation and source (listing of source and reliability as well as validity of the information).
  - Remarks (e.g., unit history, insignia).

Personality File

Personality data on designated categories of individuals are recorded. Information on key figures is valuable in establishing an opponent's intent.

Military Installation File

This file contains collected information on each installation, to include the—

- Number and types of buildings and their capacities.
- Personnel uniforms and insignia.
- Major items of equipment.
- Maps, town plans, or sketches that show the location of each installation within the city.

Organizational Chart

This chart depicts the organization of units, from the highest headquarters to the lowest unit. It includes personnel and major weapon strengths. Principal weapon and equipment charts may be prepared to supplement organizational charts.

Strength Worksheet

Used to maintain a running numerical tabulation of the enemy's personnel and equipment strengths, the worksheet contains information recorded on committed units, fire support units, and reinforcements. The strength worksheet may be combined with OOB cards or other unit files. See chapter 8 for a detailed discussion of combat strength assessment.

Target Files

Target files are either standard (full page) or card type files.

Target Intelligence Files

Target intelligence files are developed selectively and aggressively to include the targets which, when attacked, will have an effect on the enemy. These files contain the following information:

- Location (geographic and UTM coordinates, accurate within 10 meters).
- Altitude (target location expressed in meters or feet above sea level).

- Description (type, shape, attitude, dispersion, and composition).
- Vulnerability (assessed vulnerability of target to ordnance delivery, including construction, degree of protection, and dependence of the target on component parts).
- Recovery time (accurate assessment of the time required for the enemy to replace or return the target to active or usable status).
- Accessibility (location of a target with respect to other terrain or cultural features that may limit the direction or angle of attack).
- Importance (estimate of how the enemy would be affected by damage to that target).

Target Card Files

These files are comprised of sets of cards; each card contains a target serial number and information concerning a specific target. Target card files are prepared and maintained on current targets and serve as a basis for the preparation of the target list and target bulletins. Cards are also prepared and maintained on potential targets so that a threat unit changing status can quickly be added to the target list. Complete target card files are maintained by commands that will exercise control of the target list during some phase of the operation.

Tools Automation

The IAS provides an automated means to employ the intelligence recording tools. When attached to appropriate communications, the IAS can automatically filter, parse, collate, update, and display threat-related data received from the national and theater level's modernized integrated data base. That data can be manipulated to provide the functionality of an intelligence journal, enemy situation map, workbook, OOB overlays, OOB files, and target files. Desktop application software can be used to generate spread sheets for strength tabulations and other files.

SECTION III. EVALUATION

During evaluation, the intelligence section determines the relevance, the source reliability, and the accuracy of recorded information. Evaluating information in this manner also determines whether immediate or deliberate production and dissemination should be performed.

Relevance

Upon receipt, each item of information is examined for its relevance by area, time, and content. Information relevant to the AO or AOI is processed further. Urgent information is rapidly evaluated and disseminated to those who need it. Information that is not of an urgent nature is usually fully evaluated, interpreted, and disseminated later.

Reliability

The information source and the information collection agency are evaluated for reliability. The principal basis for judging the reliability of a source or agency outside the MAGTF is previous experience with the source. Normally, analysts expect a highly reliable source to provide accurate information. Analysts must consider that even highly reliable human sources have limitations and a reliable electronic source may be subject to enemy interference and deception measures. Information reported from reliable sources should be compared with other facts before being classified as fact.

The headquarters closest to the source or agency is ordinarily the best judge of its reliability. Normally, a higher headquarters accepts the reliability evaluation of the reporting headquar-

ters. Criteria for evaluating MAGTF unit reliability include knowledge of the unit's—

- Training.
- Experience.
- Past performance.

Accuracy

Accuracy involves the probable truth of the information. The most reliable method of judging accuracy is comparison with other information obtained through other collection sources and agencies.

A marked difference in the information accuracy evaluation may occur between higher and lower echelons. Higher echelons have access to more sources of information and intelligence than lower echelons, thus they provide more opportunity to confirm, corroborate, or refute the accuracy of reported data.

Regardless of the source, the accuracy of each report or piece of information is reevaluated at each echelon. Processed, evaluated, and interpreted information received from higher headquarters may be old, or new information that was not available at the time of the higher headquarters assessment may alter the information's accuracy.

Evaluation Rating System

A technique for evaluating the reliability and accuracy of information is determined by using a standard system described in STANAG 2022, *Intelligence Reports*. This system uses code letters to indicate reliability of the source and code numerals to indicate accuracy of the information.

Evaluation ratings are most valuable when information is disseminated to higher, adjacent, or lower units. Each item of information in a report should contain an evaluation to aid the recipient in understanding its significance.

Reliability Evaluation Codes

Agencies are ordinarily rated **A, B,** or **C**; however, when the source and the collecting or reporting agency are evaluated differently, the lowest degree of reliability is indicated. Reliability of the source is rated as—

- **A**—Completely reliable (indicates the source has experience and extensive background with the type of information reported).
- **B**—Usually reliable (indicates a source of known integrity).
- **C**—Fairly reliable.
- **D**—Not usually reliable.
- **E**—Unreliable.
- **F**—Reliability cannot be judged (indicates there is no basis for estimating the reliability of the source).

Accuracy Evaluation Codes

Accurate ratings are preferred, but when the truth cannot be judged, the rating of **6** is always favored over the inaccurate of ratings **1** to **5.** The accuracy of information is rated as—

- **1**—Confirmed by other sources (indicates that the information confirms currently held information and originates from a different source).

- **2**—Probably true (indicates that the information confirms all or essential parts of currently held information and does not come from the same source, but cannot be confirmed by other sources).
- **3**—Possibly true (indicates that the reported facts, on which no further information is yet available, are compatible with the previously observed target behavior; or that the known background of a person confirms that person's reported actions).
- **4**—Doubtfully true (indicates unconfirmed information that contradicts estimates or the known behavior of the target).
- **5**—Improbable (indicates information that is not confirmed by available data and that contradicts the experience previously assumed reliable).
- **6**—Truth cannot be judged (indicates there is no basis for ratings 1 to 5 because of the complete absence of other information on the same subject).

Although both letters and numerals are used to indicate the evaluation of an item of information, they are independent of each other. A completely reliable agency may report information obtained from a completely reliable source which, on the basis of other information, is judged to be improbable and rated as **A-5**. A source known to be unreliable may provide raw information that is confirmed by reliable sources, accepted as credible information, and rated as **E-1**. A report evaluated **F-6** may be accurate and should not be arbitrarily discarded.

CHAPTER 4. ANALYTICAL THINKING

Through analysis, information is transformed into knowledge. Understanding is achieved by applying judgment to knowledge, and the future is anticipated by understanding the present. Intelligence analysts enhance the understanding of the commander and staff to reduce uncertainty, limit risk, and support planning and decisionmaking. To enhance understanding for the commander, intelligence analysts must understand how decisionmaking occurs, the forms of reasoning, and the pitfalls often associated with analysis. At a minimum, the analyst must—

- Know the commander's mission, intent, and guidance.
- Understand the battlespace framework, which includes the AO, AOI, battlefield organization, and tangible and intangible factors (e.g., culture, politics, economics, religious, ethnic).

- Understand information management.
- Understand friendly and threat doctrine and tactics.
- Develop PIRs and IRs with the commander, other staff sections, and subordinate units' intelligence officers, who are geared to answer or provide additional information on a threat's capabilities, vulnerabilities, intentions, and COAs.
- Understand how to use analytical tools (i.e., IPB, automated intelligence systems, data bases, indications and warning, situation development, targeting, and OOB factors).
- Relate information to the six intelligence functions and METT-T.

SECTION I. ANALYTICAL PROCESS

Intelligence personnel analyze, synthesize, and estimate data gathered on a specific area or subject to support the commander's decisionmaking process.

Analysis

Analysis is a process used by commanders and analysts to establish IRs, to study information and available intelligence, and to determine a threat's capabilities, vulnerabilities, intentions, and COAs against friendly operations and systems. During analysis, a commander's AO and AOI are dissected for pertinent information and intelligence. In its simplest terms, analysis breaks down a geographic region or subject into bits and pieces of information and evaluates that

information for its significance. Analysis considers the battlespace and its parts in terms of depth, width, height, time, surface, subsurface, and both friendly and threat commanders' IRs and decision cycles.

The commander starts the analysis process by defining the battlespace and submitting IRs; analysts can then—

- Focus on the AO and critical aspects of the AOI.
- Prioritize all IRs.
- Query intelligence data bases.
- Determine gaps.
- Leverage collection and production assets to estimate the threat's capabilities, vulnerabilities, and intentions.

Synthesis

Synthesis is the piecing of information into a coherent, meaningful picture. It is based on the ongoing or previous analysis of separate information and events taking place within a given area. More than simply pulling together information, synthesis determines the relationships that exist among that information. It allows commanders and analysts to see the battlespace as a whole and to rapidly discern emerging patterns and indicators. Threat capabilities, vulnerabilities, and intentions are estimated based on the synthesized picture.

Estimation

Estimation is the most challenging element and the last step in the analytical process. It involves a high degree of risk because it addresses future outcomes and probabilities. Intelligence analysts must stretch their intellectual resources to the limit to provide the best estimate possible given the information at hand and the needs of the commander. Employing experience, judgment, intelligence tools, and methodologies, the intelligence analyst must base estimates on solid analysis of identified activity patterns to determine the threat's intentions and probable COAs as well as the effects of those actions on friendly forces. The following example illustrates the analysis, synthesis, and estimation process.

Example: Analysis, Synthesis, and Estimation Process.

Information from aerial reconnaissance indicates the movement of approximately 31 moving target indicators (MTIs). The MTI locations and times are annotated on a mission report. Based on this report, the analyst conducts mental functions (analysis), attempts to fuse this information into what is happening in the battlespace (synthesis), and predicts intentions (estimation). To arrive at a conclusion, the analyst—

- Plots MTI locations on a situation map and annotates the date-time group. Looks for any relationships to previously reported units in the area and—
  - If a relationship is not found, determines what must be done to answer the who, what, where, and why questions.
  - If a relationship is found, determines the type of unit (e.g., tanks, armored personnel carriers), the direction of movement, and the unit's speed as MTIs pass through named AOIs.
- Looks at the big picture to synthesize the information and to answer the following questions:
  - Does the movement indicate where the MTIs will be committed?
  - Is this part of the threat's main effort?
- Prepares to state the threat's intentions through the combination of analysis and synthesis.
  - Provides an estimate, which specifies the type of equipment, the unit designator, the speed of march, and the probable time of attack.

SECTION II. ANALYTIC PROBLEM SOLVING

Intelligence analysis involves the application of reason and logic to solve problems related to the effects of weather, terrain, and threat on current and future friendly operations. During fast-paced, tactical-level operations, the entire analyze-synthesize-estimate process may occur mentally within a matter of seconds. At higher levels, the process may be more involved, with more time available to rigorously apply the analytical techniques. This section discusses

the problem solving analytical theories, terms, and processes most commonly used by military intelligence analysts.

Analytical Theories

Most analytical theories begin with a proposition or premise, which is a statement that may or may not be true.

Proposition or Premise

A proposition or premise is a combination of evidence and assumptions, which, when combined, lay the foundation for an argument, hypothesis, or conclusion. Propositions can be detailed or abstract, observable or inferable, with varying degrees of certainty and fuzziness.

Detailed

In military intelligence, the term for a detailed proposition is a specific information requirement. An example of a detailed proposition is: "An enemy company is defending at named area of interest (NAI) 13." When creating this mental proposition, the analyst is at the "I wonder if stage" of analysis. Because the statement is not known to be true or false, the analyst rephrases the proposition as a question. For example: "Is there an enemy company defending at NAI 13?" The detailed proposition requires verification from a collection asset.

Abstract

The doctrinal term for an abstract proposition is an IR, but commanders designate critical abstract propositions as PIRs. An abstract proposition might be: "Is the enemy's main effort going to be along the landing beaches south of Church Hill?" This proposition is abstract because no one single observation will confirm or deny it. The abstract proposition requires analysis and deduction based on multiple collection asset reports of detailed propositions.

These reports would allow the analyst to discern or infer the enemy's main effort.

Observable

A single collection asset can verify a detailed proposition through observation and documentation in a single report.

Inferable

Abstract propositions can only be inferred by the analysis of a set of detailed propositions from multiple reports. The intelligence staff normally generates specific information requirements to subdivide an IR or PIR into more detailed propositions that can be addressed through integrated intelligence operation (i.e., collection, production, and dissemination) planning. The relationship between two propositions allows an intelligence analyst to make inferences and analyze intelligence information or to arrive at analytical conclusions. This relationship is expressed as: "Proposition X causes proposition Y." The same relationship can also be expressed as: "From the observance of proposition Y, we can infer proposition X." The following example illustrates the relationship between two propositions.

Example: Relationship between Two Propositions.

The existence of a regimental artillery group at NAI 14 will cause the existence of certain air defense assets in and around NAI 14. This proposition is restated as: "From the observance of certain air defense assets in and around NAI 14, we can infer the existence of a regimental artillery group at NAI 14."

The probability of each relationship must be taken into account. For example, the types of air defense assets normally associated with the regimental artillery group may also protect a logistic support area or command post. It is more accurate to state: "From the observance of a certain type of air defense near NAI 14, we can infer there is a 50 percent probability of a regimental artillery group in the NAI 14, a 40 percent probability NAI 14 contains a logistic support area, and a 10 percent probability it contains a command post."

Certainty and Fuzziness

Propositions have varying degrees of both certainty and fuzziness. Certainty is the degree of belief in something. An example of certainty is: "I personally saw an enemy company at NAI 13, and we have six corroborating reports." A less certain proposition would be: "HUMINT has a semireliable source that claims there is a company at NAI 13, and we have no other reports on the subject."

Fuzziness is the measure of how well the known information matches the desired information. An example of a certain proposition is: "Our patrol reports the exact number of enemy soldiers and equipment for an enemy company." A fuzzy proposition would be: "Our patrol reports about half the number of men and equipment of an enemy company, so this could be an augmented platoon, two understrength platoons, an extremely weak company or an under-reported enemy company."

A Priori

Probabilities, in the absence of other information, are called *a priori*. In practice, the *a priori* is rarely assessed in isolation of other information; however, more information is possessed than the contents of a single report. This leads to the use of a conditional probability. An example of this situation states *a priori* of the enemy commander choosing to concentrate his main effort along avenue of approach number 1 (AA-1) may be 66 percent. However, the conditional probability of the main effort along AA-1 might be 25 percent given that an unusually large number of combat vehicles on AA-2 were observed.

Applied Logic

Typically, intelligence deals with obscure data, few facts, and severe time constraints, which can limit the analyst's ability to apply formal logic in intelligence analysis. Nevertheless, there are areas of applied logic that are most relevant to intelligence analysis.

In its most basic form, analysis involves drawing reliable conclusions based on facts, opinions, and inferences. As information is received, it is categorized as either fact or opinion. From these facts and opinions, analysts attempt to piece together a picture of the battlefield and the commander's battlespace and to make certain inferences or conclusions. When presenting the resulting conclusions, it is important to distinguish between what is fact and what is opinion.

Facts

A fact is a statement that has been demonstrated to be true. As an example, it is a fact that you are reading this statement. Given a preference, an analyst will always choose to work with facts. Unfortunately, facts are not always available. In the absence of facts, opinions may be used. Combining available facts and expert judgment, analysts attempt to piece together a picture of the battlefield and the commander's battlespace. When presenting the resulting conclusions, it is important to distinguish between what is fact and what is opinion.

Opinions

When facts are unavailable, an analyst might use opinions. An opinion is what someone believes to be true, but it may or may not be true. Sometimes opinions are uttered as statements of fact and often they reflect value judgments. A value judgment is an expression of personal taste, reference, worthiness, merit, quality, excellence, or bias. For example: "Electronic intelligence is a far more reliable source of intelligence than HUMINT." In this case, the speaker's perception is an opinion or generalization. Analysts must use extra caution when basing conclusions on opinions.

Inferences

Inferences are conclusions drawn from facts, opinions, or other inferences. Noting that one area of foliage appeared discolored in contrast

to surrounding foliage, an image interpreter concluded that the area being looked at contained a camouflaged position. Based on expert knowledge of imagery, the analyst inferred the presence of a camouflage position from the fact of discolored foliage. Such inferences may serve as input for subsequent problems; in this case, determining what is camouflaged at that particular location. Inferences are particularly important in determining a threat commander's intent. Unless the threat commander announces it, intent can only be established by inference. Such inferences are based on facts developed through the continual study of an adversary's doctrine, tactics, and capabilities. Whenever possible, inferences should be drawn from facts, or a mixture of facts and opinion. Conclusions drawn from opinions alone are prone to be wrong and should not carry the same weight as those drawn from facts.

Reasoning

Reasoning is the mental process that is brought to bear on facts, opinions, and inferences. Analysts solve problems through deductive and inductive reasoning.

Deductive

The process of reasoning from general cases to specific cases is deductive reasoning. It is the drawing of conclusions from one or more propositions or premises. For example, the statement, "Air strikes and naval bombardment always precede an amphibious landing," is a proposition based on an assumption. Propositions may or may not be true; in the case of the statement above, not all amphibious landings are preceded by preparatory fires. For deduction to be used effectively, intelligence analysts must make certain their propositions are true and their reasoning is correct or valid.

Example 1: Deductive Reasoning.

A Naval intelligence analyst is given a report about an unidentified submarine transiting the polar ice cap. The analyst deduces that—

- The ability to transit under the ice cap requires long submerged endurance.
- The only submarines with adequate endurance are nuclear-powered.
- The unidentified submarine is nuclear-powered.

In this case, the analyst reasoned from a general type (submarines) to a specific type (nuclear-powered).

In the example, the propositions are stated as facts. However, depending on the time of year, the polar ice cap can be transited on the surface. Furthermore, the second proposition, although stated as a fact, assumes that the threat has not developed high-endurance power sources other than nuclear energy. As a result, the conclusion, although valid, is unreliable. In order to be reliable, a conclusion must be drawn from valid and true propositions. If a deductive argument is valid, and if the propositions of that argument are true, then the conclusion of that argument must also be true.

Example 2: Deductive Reasoning.

During a field training exercise, reconnaissance elements are able to photograph opposing force tanks in defilade. The photograph shows a main gun tube with a 125mm bore and three track-return rollers. Four types of threat tanks are equipped with the 125mm gun (T-64, T-72, T-80, and T-90), but only two have three track-return rollers (T-72 and T-90). Since the T-90 was not replicated in this exercise, analysts conclude that friendly forces will be engaging T-72 tanks. In this case, the reasoning went from the general (125mm gun and three track-return rollers) to the specific (T-72, which was the only tank with both characteristics replicated in the exercise). The argument is valid and the propositions forming the argument are true, so the conclusion of the argument must also be true.

Inductive

The process of arriving at conclusions based on evaluating facts or inferences is inductive reasoning.

Example 1: Inductive Reasoning.

The following reports reach an intelligence agency regarding the actions of two adversarial countries—

- Country X is massing armor and artillery along the border of Country Y.
- Country X has also blockaded sea-lanes used by both countries.
- Finally, Country X has imposed wartime restrictions on its civilian population.

From these reports, the analyst uses inductive reasoning by inferring that hostilities between the two countries are imminent.

Induction goes beyond the facts or observations to a statement that has not been or cannot be verified. Since only verified data can be called reliable, conclusions drawn inductively are somewhat unreliable.

Example 2: Inductive Reasoning.

An intelligence analyst is given the following information about a coalition armored vehicle:

- Fact 1—Five road wheels and four return rollers.
- Fact 2—Armament that includes a single 73mm gun, one coaxial- and two hull-mounted 7.62mm machineguns, and a single SAGGER antitank missile mounted on the barrel of the 73mm gun.
- Fact 3—Crew of four with three passengers.
- Inference 1—A maximum speed estimated to be 80 kilometers per hour.

From these characteristics, the analyst inferred that the reported vehicle was a Russian-made BMD. Since a number of separate facts or inferences were used in the reasoning process, the analyst arrived at a conclusion through inductive reasoning.

The strength of an inductive argument depends on how probable the conclusion would be true if the premises or propositions were true. Inductive arguments are characterized as being strong or weak vice valid and invalid. Arguments are made strong by—

- The number of instances cited in the propositions.
- The number of propositions that confirm the conclusion.
- The closer in time the occurrences are to the conclusion.
- Dissimilarities in the evidence that still support the conclusion.

Very often propositions used in deduction are arrived at inductively and vice versa.

Example: Deduction and Induction.

Major proposition: The massing of troops along a border is a prelude to war.

Minor proposition: A country is known to have massed troops along the border.

Conclusion: This country is about to initiate war with its neighbor.

At first glance, the deductive argument shown above might seem acceptable. However, a closer look will show that the major proposition is not always true. In certain instances, troops could be massed for internal security, exercises, or a show of force. The major proposition, derived from inductive reasoning, by itself is an ambiguous signal. Assuming the propositions are true, and assuming the analyst reasoned validly, the conclusion the analyst reached is valid. An analyst may reason correctly, but from data that is incorrect, thus arriving at conclusions that are not true.

Tests of Truth

Both inductive and deductive reasoning involve three basic tests of truth that intelligence analysts employ to determine the truth of propositions.

Correspondence Test of Truth

The theory that truth is a statement that corresponds to reality is known as the correspondence test of truth. An analyst, who is studying an information report, notices that the presented information is the result of first-hand observation. Knowing the source to be professionally competent, the analyst assumes that every statement in the report corresponds to reality.

In the example, the statements or other evidence corresponded to reality. To test the degree of correspondence, observations are required. These observations must be tested by additional observations. The chief criterion in observations is objectivity, and using a mix of collection assets can attain greater objectivity.

Analysts naturally place more confidence in one source or system than another. In the case of the UAV report verses the pilot's report, the analyst had more confidence in the UAV's ability to observe the target from multiple aspects. The UAV-derived information had more credibility than the pilot's report, because the pilot may have only had a fleeting glimpse of the target while trying to egress. When a variety of sensors tend to corroborate each other, confidence in the conclusions increases.

The correspondence test of truth requires observations to test whether or not, and to what extent, statements correspond to reality. One problem with this theory is that the threat seldom permits direct observations and often

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Example: Correspondence Test of Truth.

Pilots returning from an interdiction mission claim three tanks destroyed. The squadron chief interrogated each pilot separately and they gave substantially the same report.

Assuming the pilots' claims are accurate, then it would reflect reality. By reporting battle damage assessment of three tanks probably destroyed, the squadron chief is adhering to the correspondence test of truth.

Despite the fact that all pilots of one flight claimed three tanks destroyed, the MAGTF commander wants more supporting evidence. To provide confirmation, the MAGTF G-2 plans an UAV mission over the area where the tanks were reportedly hit. Both the commander and the G-2 are placing more credibility in visual evidence, because it is believed to be more objective and less prone to human error. This ignores the fact that video requires interpretation, and this interpretation involves a degree of subjectivity.

Humans must interpret all images. When humans interpret images, they use subjective judgment. One of the weaknesses of the correspondence test of truth is that observations are required to establish the truth. Invariably, these observations must be tested by other observations.

The UAV tape revealed three badly damaged tanks in defilade. The MAGTF battle damage assessment analyst considers the UAV report along with the pilot debriefs. Based on the combined information, the analyst reports three tanks confirmed damaged.

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goes to great lengths to prevent direct observations or to deceive those observations.

Coherence Test of Truth

This test of truth uses consistency with other ideas or facts to validate statements. Where direct access to the threat is denied, the coherence test of truth becomes necessary. The coherence theory refers to how consistent different pieces of information are in relation to each other. An analyst considering a new piece of information

that corroborates known information would place more credibility in the new information and the conclusions drawn from it.

In the realm of theory, intelligence usually works with some factual basis for most inferences or conclusions. The coherence test of truth supplements the correspondence test of truth.

Example: Coherence Test of Truth.

In the latter part of September, the commander in chief's intelligence staff considered the following information:

- The ACME coalition countries normally conclude a training cycle with a large-scale combined exercise (historical record).
- Visitors to Coyote Land reported being denied access to certain areas in the vicinity of Road Runner in the western Tunnel Province (confirmed report).
- Reports indicate certain infantry, armor, and engineer units from Tasmania, Elmer Land, and Chickenhawk have moved from their garrison locations (unconfirmed reports).
- All commercial air traffic to Road Runner will be restricted for a period of 2 weeks, starting 1 October (confirmed report).

The intelligence staff concluded that this year's ACME exercise will take place in or near Road Runner, Tunnel Province, during the period 1 to 14 October. Although no one piece of information pointed directly to this conclusion, all pieces of information seemed consistent with each other as well as to the conclusion.

Pragmatic Test of Truth

This test proposes that a given statement is true if it works in practice.

A practical tool, the pragmatic test of truth has some weaknesses. First, the results may only appear to justify the means used to achieve them. Second, a successful outcome may be attributed to other factors that could have produced the same outcome. In the Admiral Scott example, the use of radar-controlled guns may have produced the same result no matter what formation was used. Lastly, an unsuccessful outcome does not necessarily imply that the means used were unsound; again, other unknown factors may have contributed to the unsuccessful outcome.

Example: Pragmatic Test of Truth.

Prior to the Battle of Cape Esperance in World War II, Admiral Norman Scott organized a task force into a long, single column. Admiral Scott believed this line-ahead formation would be effective against the Japanese units' night tactics. In the ensuing battle, Scott sank two Japanese destroyers and severely damaged two cruisers. After the battle, Admiral Scott concluded the original line-ahead formation theory was indeed effective. By combining radar-controlled fire control systems with line-ahead formation, Admiral Scott believed any night battle could be mastered.

SECTION III. PITFALLS OF ANALYSIS

The application of logic and reasoning is a mental process that is subject to numerous influences. Intelligence analysts involved in discerning facts, inferences, and conclusions are prone to the influences that shape and mold their view of the world and their ability to reason. These influences are referred to as pitfalls of analysis. To minimize their impact, analysts must be able to recognize these pitfalls in their own analysis and the analysis performed by others. Logical

fallacies and biases are two general categories of analytical pitfalls.

Logical Fallacies

Logical fallacies are errors in the reasoning process caused by the failure to apply sound logic. Though usually committed accidentally, these fallacies are sometimes used deliberately to persuade, convince, or deceive. Omission and assumption are two categories of logical fallacies.

Omission

Fallacies of omission leave out something important. The argument may omit a consideration of many cases; it may omit a consideration of a hypothesis that would account for the same conclusion; or it may omit something unfavorable to the argument. Fallacies of omission can occur in many forms.

Oversimplification

Oversimplification is a generality that fails to adequately account for all the complex conditions bearing on a problem.

Example 1: Oversimplification.

"Air power and the M1A1 tank won the Gulf War." This statement ignores the fact that the attack aircraft and the M1A1 tank were only two of many weapons systems and other capabilities used to provide critical support and ultimate success during the Gulf War.

Oversimplification results when one or more of the complex conditions pertaining to a certain situation are omitted and includes—

- Ignoring facts.
- Using generalities.
- Applying an inadequately qualified generalization to a specific case.

Example 2: Oversimplification.

An ordnance specialist inspecting a captured, hand-carried, surface-to-air missile launcher concludes that the threat has no effective low-level air defense. The assessment is based on the fact that the launcher is equipped with antiquated guidance mechanisms. The ordnance specialist's conclusion omits the following considerations:

- That the launcher was planted by the threat to give a misleading picture of their true capabilities.
- That the threat abandoned the launcher because it was ineffective and more capable systems were available.
- The weapon may have been deliberately doctored to mislead weapons experts.

Other weapons (e.g., antiaircraft artillery, small arms) can be very effective in some situations.

Hasty Generalization

Conclusions drawn from samples that are too few or from samples that are not truly representative are hasty generalizations.

Example: Hasty Generalization.

After interrogating an enemy prisoner of war (EPW), the interrogation officer reports the threat's morale as extremely low and that surrender is imminent.

In this case, the interrogator is making a hasty generalization because the sample population considered (one EPW) is too small.

Composition

The fallacy of composition is erroneously reasoning from the properties of a single entity to properties of a group.

Example: Composition.

During a skirmish with a Viet Cong battalion, a single EPW was captured. This EPW was suffering from malaria, malnutrition, and low morale. It was noted that the EPW was equipped with a semiautomatic weapon of World War II vintage. After a brief interrogation, the intelligence analyst reported the enemy battalion recently engaged was starving, diseased, and poorly armed.

The intelligence analyst failed to consider that—

- Only one prisoner was captured because he was too sick to keep up with the rest of the battalion.
- The weapon of early vintage did not necessarily make it ineffective.
- Few captured prisoners have high morale; in fact, low morale could just as easily result from being captured as it could contribute to being captured.

In this example, besides falling prey to hasty generalization, the analyst also demonstrated the fallacy of composition by applying the properties of a single prisoner to an entire enemy unit.

Division

The fallacy of division erroneously assumes that the characteristics of a group exist in every member of that group.

Example: Division.

Members of the threat guard's brigade had never surrendered in previous combat. After a recent engagement, an EPW stated he was a member of the guard brigade. The interrogator doubted the EPW's statement because personnel from that brigade never surrender.

In this example, the interrogator committed the error of division by assuming that since no guard brigade personnel had ever surrendered, the EPW could not be from that brigade. The analyst took the characteristics of a unit and uniformly applied them to every member of that unit.

Special Pleading

In special pleading, only one side of an argument is presented.

Example: Special Pleading.

At the conclusion of a staff study, the staff members, who are proponents of the proposed COA, are directed to list the pros and cons of the proposal.

Arguments for the proposal:

- Job requires little to no increase in manpower.
- Job can save the Government 2 million dollars.
- Risk to personnel is minimal.
- Equipment is readily available.
- Little special training is required.

Arguments against: None.

By omitting arguments against the COA, the staff committed the fallacy of special pleading. This fallacy also arises when the many interacting forces that give rise to a situation (i.e., cause and effect) are ignored.

Post Hoc

In the fallacy of *post hoc* ergo *propter hoc* (before the event, therefore caused the event), consideration of other factors that might have accounted for the same result are omitted. Post hoc fallacies often occur when trying to establish cause and effect.

Example: Post Hoc.

An aircraft equipped with a new jamming pod was not fired on while flying over threat-controlled territory. It was concluded that, since the aircraft was not intercepted or fired upon, the jamming pod was extremely effective in suppressing threat electronic systems.

The conclusion may or may not account for the aircraft not being attacked. Other considerations include—

- The threat was obtaining electronic intelligence on this new pod.
- The threat recently relocated several surface-to-air missile units and did not want to reveal their new positions.

False Dilemma

The fallacy of the false dilemma omits consideration of more than two alternatives.

Example 1: False Dilemma.

"Either we attack at dawn or the enemy will be too strong."

The two words that generally warn of a potential false dilemma fallacy are "either" and "or." False dilemmas exclude middle alternatives and consider only options of two extreme positions.

Example 2: False Dilemma.

An intelligence staff officer reports to the commanding officer that the enemy has only the capability to either defend in place or retreat. The intelligence officer committed the fallacy of false dilemma by failing to anticipate or ignoring that the enemy could—

- Attack if they were willing to accept high casualties.
- Withdraw to an alternate defensive position.
- Conduct a delaying action.

Assumption

Fallacies of assumption relate to begging the question, stating hypotheses contrary to fact, poisoning the well, and misusing analogies. All of these fallacies implicitly or explicitly involve assumptions, which may or may not be true.

Begging the Question

This fallacy occurs when a speaker gives what is assumed to be a legitimate response to a question but it is merely a rephrase of the question.

Example 1: Begging the Question.

When asked why the enemy was not pinned down by fire, the platoon leader replied: "Our suppressive fire was inadequate."

The fallacy in this response is that by definition suppressive fire pins down the enemy or is intended to pin him down. Since the platoon failed to pin down the enemy, the inadequacy of this fire was self-evident.

Example 2: Begging the Question.

A pilot reporting to a debriefing officer stated: "In response to your questions about whether or not all of my bombs landed on target, I'd like to say that as soon as I completed my pass there were two large secondary explosions."

The pilot begs the question by shifting attention from the primary issue to a secondary one. The response did not address the question that was asked.

Stating Hypotheses Contrary to Fact

This fallacy occurs when someone states decisively what would have happened had circumstances been different. Such fallacies involve assumptions that are either faulty or simply cannot be proven.

> **Example: Hypotheses Contrary to Fact.**
>
> If we had not supported Castro in his revolutionary days, Cuba would be safe for democracy today.
>
> Besides being a gross oversimplification, the assumption made in the statement cannot be verified.

Poisoning the Well

This fallacy seeks to discount evidence before it is presented, most often by discrediting the source.

> **Example 1: Poisoning the Well.**
>
> An ardent spokesman against the value of strategic bombing states: "You can't trust that man's testimony regarding the effectiveness of strategic bombing; he's employed by the Air Force."
>
> The speaker is trying to discredit contrary evidence by creating the specific impression that the testimony is biased because the testifier represents a certain organization.
>
> **Example 2: Poisoning the Well.**
>
> One intelligence analyst says to another analyst engaged in pilot debriefs: "Be careful with this man; it is his first mission."
>
> This statement intends to discredit evidence before it is presented. It pleads against the subject by assuming that the pilot's lack of experience will result in bad information.

Misusing Analogies

Analogies are strong tools that can impart understanding in a complex issue. In the absence of other evidence, intelligence analysts may reason from analogy. Such reasoning assumes that the characteristics and circumstances of the object or event being looked at are similar to the object or event in the analogy.

The strength of a conclusion drawn from analogy is proportional to the degree of similarity between two objects or events. The danger in reasoning from analogy is assuming that because objects, events, or situations are alike in certain aspects, they are alike in all aspects.

Conclusions drawn from analogies are inappropriately used when they are accepted as evidence of proof. Situations may often be similar in certain aspects, but not in others. When one generalizes indiscriminately from analogy to real world, this is misusing analogies. One method for weakening an analogous argument is by citing a counteranalogy. A counteranalogy weakens the original analogy by citing other comparisons that can be made on the same basis.

Biases

A subjective viewpoint, bias indicates a preconceived notion about someone or something. Although biases interfere with successful analytic thinking, they can have a positive influence on analysis. With a lack of information, a preconceived notion can give the analyst a starting point for thinking about a situation. However, biases generally have a detrimental impact because they obscure the true nature of the information. Intelligence analysts must be able to recognize cultural, organizational, personal, and cognitive biases and be aware of the potential influence they can have on judgment.

Cultural

Americans see the world in a certain way. The inability to see things through the eyes of someone from another country or culture is cultural bias. Biases interfere with the analyst's ability to think the way an enemy commander might think or to give policymakers informed advice on the likely reaction of foreign governments to American policy. Also known as mirror imaging, cultural bias attributes someone else's inten-

tions, actions, or reactions to the same kind of logic, cultural values, and thought processes as the individual analyzing the situation. Although cultural bias is difficult to avoid, the following measures can lessen its impact:

- Locate individuals who were born or raised in the analyzed country or culture and—

  - Include them in the analytical process.

  - Ask their opinion about likely responses to friendly actions.

  - Take care when using their opinions, since they may be subject to biases regarding ethnic groups or cultures in the region and their knowledge may be dated or inaccurate.

- Locate regional experts such as foreign area officers and regional area officers who have lived or traveled through the area and are somewhat conversant regarding the culture. Assess the quality of the information provided against the level of knowledge and experience the individual has for that culture or region.

Organizational

Most organizations have specific policy goals or preconceived ideas. Analyses conducted within these organizations may not be as objective as the same type of analysis done outside the organization. Groupthink and best case are organizational biases that can affect subjective internal analysis.

Groupthink

This bias occurs when a judgment is unconsciously altered because of exposure to selective information and common viewpoints held among individuals. Involving people outside the organization in the analysis can combat this bias.

Best Case

This bias occurs when an analyst presents good news or bad news in the most optimistic light. The judgment is deliberately altered to provide only the information the commander wants to hear. Analysts can avoid this bias by having the moral courage to tell the commander the whole story, good and bad.

Personal

Personal biases stem from past experiences. If a thought pattern previously led to success, the analyst tends to follow that pattern. Even if the situations have nothing in common, the tendency to follow past successful methods is very strong.

Cognitive

The all-source intelligence analyst evaluates information from a variety of sources (e.g., HUMINT, SIGINT, IMINT, open source). The degree of reliability, completeness, and consistency varies from source to source and even from report to report. This variance often creates doubt about the reliability of some sources. Cognitive biases that affect the analyst include vividness, absence of evidence, oversensitivity to consistency, persistence of impressions, dependence on memory, and acceptance of new intelligence.

Vividness

Clear and concise or vivid information has a greater impact on analytical thinking than abstract and vague information. A clear piece of information is held in higher regard than a vague piece of information that has more value as evidence. Analysts must consider that an enemy may use deception to portray vivid facts, situations, and capabilities that they want the friendly intelligence effort to believe.

Absence of Evidence

Lack of information is the analyst's most common problem, especially in the tactical environment. Analysts must do their best with limited information and avoid holding back intelligence because it is inconclusive. To avoid this bias, the analyst should—

● Realize that information will be missing.
● Identify areas where information is lacking and consider alternative hypotheses.
● Adapt or adjust judgments as more information becomes available.
● Consider whether a lack of information is normal in those areas or whether the absence of information itself is an indicator.

Oversensitivity to Consistency

Consistent evidence is a major factor for confidence in the analyst's judgment. Information may be consistent because it is appropriate, or it may be consistent because it is redundant, is from a small or biased sample, or is the result of the enemy's deception efforts. When making judgments based on consistent evidence, the analyst must—

● Consider if the evidence represents all available information and intelligence. If it does not, or if it is not known, then the confidence level will be low, regardless of the consistency.

● Be receptive to information that comes in from other sources regardless of whether it supports the hypothesis or not.

● Be alert against confirmatory circular reporting, which is intelligence already obtained by the unit that is then reformatted by other units and intelligence organizations, modified slightly, and disseminated back to the unit.

● Know, to the degree possible, the original source for all intelligence to ensure that a circular report is not used as confirmatory evidence for an intelligence estimate or conclusion.

Persistence of Impressions

When evidence is received, there is a tendency to think of connections that explain the evidence. Impressions are based on these connections. Though the evidence eventually may be discredited, the connection remains and so do the impressions.

Dependence on Memory

The ability to recall past events influences judgment concerning future events. Since memory is more readily available, it is easy to rely on memory instead of seeking a proper sample to predict events.

Acceptance of New Intelligence

Often newer intelligence reports are valued more than older intelligence reports, which can occur when the intelligence collectors or sources are different.

Example: New versus Old Intelligence.

A ground reconnaissance team reports at 1300 that an enemy mechanized column is moving along a line of communications (LOC) at a given speed and direction. Later, at 1325, an AV-8B in-flight report indicates that the enemy column is moving along a different LOC.

In such cases, the newer intelligence report should be assessed against the full tactical context, and not simply its timeliness, to preclude incorrect intelligence interpretations.

Using the above example, follow-on coordination with the better situated ground reconnaissance team, capable of observing the same LOC and enemy targets for a greater period of time, may lead to a very different intelligence interpretation.

SECTION IV. DECISIONMAKING

One aim of intelligence analysis is to allow the commander to make timely and informed decisions by providing the right elements of available information at the right time and place. Gaining more information can reduce uncertainty, but a decrease in uncertainty occurs at the expense of time. Uncertainty and time always influence the commander's analytical and intuitive decisionmaking ability.

Analytical

In analytical decisionmaking, several options for solving the problem at hand are identified, studied, and compared to arrive at the best solution. Basically, comparing multiple options concurrently produces the optimal solution. This approach to decisionmaking tends to be methodical and time-consuming.

Intuitive

In intuitive decisionmaking, the commander assesses the situation in an effort to recognize a pattern; once a pattern is identified, experience and judgment guide the commander in evaluating the key elements of the problem and rapidly determining a satisfactory solution. The intuitive approach focuses on situation assessment instead of on the comparison of multiple options. Generally much faster than analytical decisionmaking, intuitive decisionmaking aims at finding the first solution that will satisfactorily solve the problem.

Comparison

Each analytical and intuitive decisionmaking approach has strengths and weaknesses. Although conceptually distinct, the two are rarely mutually exclusive. Intelligence supports analytical decisionmaking by helping to identify available options and by providing the estimates and studies for comparisons of those options.

Intelligence supports intuitive decisionmaking by providing the knowledge that helps the commander recognize emerging patterns. The process of intelligence analysis employs both analytical and intuitive decisionmaking to arrive at the conclusions presented to the commander. The IPB process, particularly if the various types of products are prepared in detail, is a distinctly analytical process. The decision support template derived from the IPB process, however, is a tool that facilitates intuitive decisionmaking. Generally, the analytical approach conforms well to the prehostility or contingency planning phase, while the intuitive model is usually more appropriate during execution of tactical operations.

The challenge for the intelligence analyst is knowing how much and what kinds of information the commander requires. Too much information may only confuse an intuitive decisionmaker and information requirements will change continually. Too little information for an analytical decisionmaker may result in procrastination and the continual demand for more information. The key to overcoming these challenges is a solid understanding of the commander, constant interaction through training and exercises, and a well developed process for identifying information requirements.

CHAPTER 5. INTELLIGENCE PREPARATION
OF THE BATTLESPACE

An analytical methodology, IPB is employed during operations to identify, assess, and reduce the effects of enemy, environment, and terrain uncertainties on friendly and threat forces. The IPB process analyzes the threat and environment in a specific geographic area to determine and evaluate the threat's capabilities, vulnerabilities, and probable COAs. Designed to support staff estimates, planning, and decisionmaking, IPB results are incorporated into the intelligence estimate, which provides knowledge-based intelligence that can be visualized and absorbed by decisionmakers. See appendix A for a detailed outline of the intelligence estimate format. The formatted graphics and images provided through the IPB process help the commander to rapidly visualize, assimilate, and apply intelligence in the decisionmaking process. This enhances the commander's ability to discern patterns as they emerge and to conduct recognitive or intuitive decisionmaking, thereby increasing operational tempo.

Operations and intelligence must have a common focus to successfully apply the interactive IPB process. See FM 34-130/Fleet Marine Force Reference Publication (FMFRP) 3-23-2, *Intelligence Preparation of the Battlefield*, for a detailed discussion of the IPB process.

The IPB requirements for a humanitarian assistance operation differ significantly from a combat operation against a conventional armed force. In a given situation, a unit or staff section may prepare some or all IPB products. Determining which products to prepare and identify-

ing their relative priority depends on the factors of METT-T and command guidance.

The IPB process develops tailored, mission-focused, knowledge-based intelligence that is incorporated into a variety of intelligence products. Intelligence preparation of the battlespace provides intelligence in graphic and image formats that help the commander rapidly visualize, absorb, and apply the intelligence in the decisionmaking process. Numerous standard overlays and graphics are associated with the IPB process; however, each situation is unique. A modified combined obstacle overlay and threat doctrinal template that support conventional operations may be of limited use in military operations other than war (MOOTW). The type of products generated as a result of IPB vary based on the—

- Size of the unit.
- Time available.
- IRs.
- Characteristics of the mission and AO.

The IPB process defines the battlespace environment, describes the battlespace effects, evaluates the threat, and determines threat COAs. These steps are discussed in this chapter and remain constant regardless of the type of mission or size of the staff section; however, the application of the steps varies with each situation. This chapter also goes into detail about the decision support template and discusses the abbreviated IPB process.

SECTION I. STEP 1—DEFINE THE BATTLESPACE ENVIRONMENT

The first step of the IPB process identifies the physical space and specific features of the environment or activities that may influence friendly and enemy COAs and commander's decisions. When defining the battlespace environment, intelligence analysts conduct the following procedures.

Identify Significant Characteristics of the Environment

Characteristics of the battlespace environment that will influence the commander's decisions or affect the COAs available to friendly forces or the threat are of special significance. During a humanitarian assistance operation, for example, the location and activities of civilian relief organizations might be a significant characteristic of the battlespace. During support to counterdrug operations, significant characteristics might include narcotics production or weapons trading. During a conventional war, typical characteristics may include location and activities of enemy reserves, reinforcements, and long-range fire support. When identifying significant characteristics of the battlespace, intelligence personnel consider threat forces and other aspects of the environment that may have an effect on accomplishing the unit's mission. Depending on the situation, these environmental aspects may include—

- Geography (e.g., area terrain and weather).

- Population demographics (e.g., ethnic groups, religious groups, age distribution, income groups).

- Political or socioeconomic factors (e.g., the role of clans, tribes, gangs).

- Infrastructures (e.g., transportation, telecommunications).

- Rules of engagement or legal restrictions (e.g., international treaties, agreements).

- Threat forces and their capabilities (e.g., paramilitary and unconventional forces).

Initially, each environmental characteristic is examined in general terms to identify its significance to the command and its mission. Identifying the significant characteristics of the battlespace environment helps establish the geographical limits of the AOI and directs analytical efforts in steps 2 and 3 of the IPB process. It also helps identify uncertainties or gaps in the type of information and intelligence required to complete the IPB process and answer the PIRs and IRs (see fig. 5-1).

Identify the Command's Area of Operations and Battlespace Limits

The AO represents an area assigned to a commander with authority and responsibility for the conduct of operations (see fig. 5-2). The limits of the AO are normally the boundaries specified in the OPORD or higher headquarters execute order that defines the command's mission.

Area of Influence

This is the geographical area where a commander is able to influence operations through C2 of maneuver or fire support systems. Based on the range of organic or supporting weapon systems, the area of influence may extend beyond the AO.
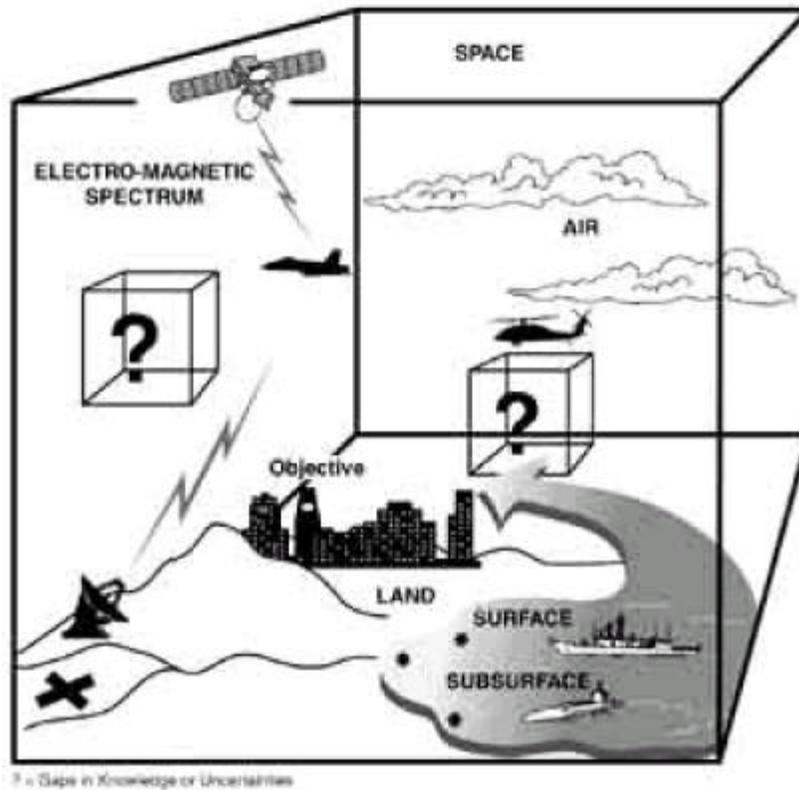
Figure 5-1. Battlespace Examination.
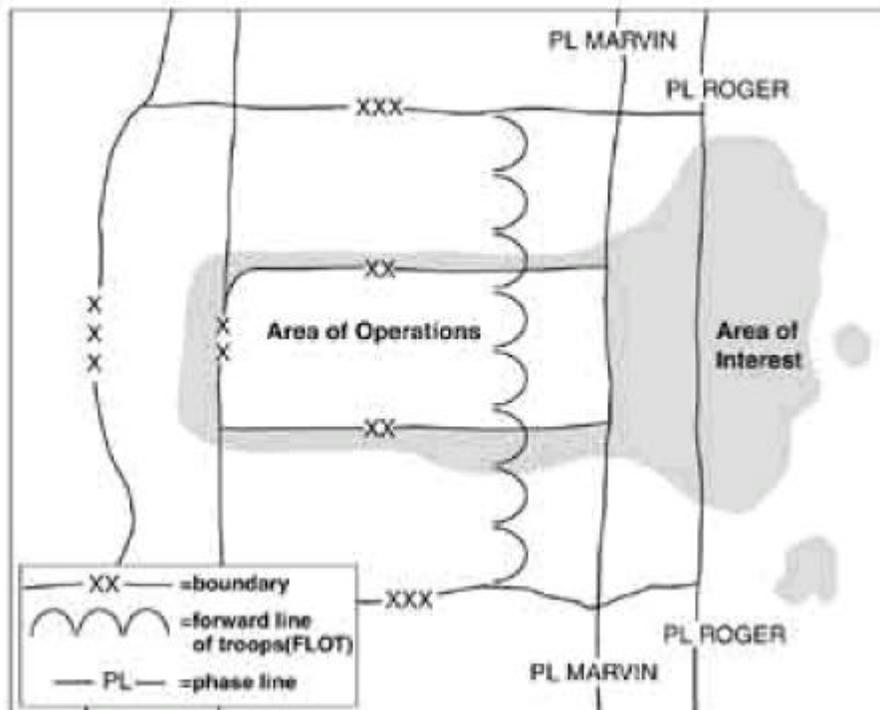
Figure 5-2. AO and AOI.

Area of Interest

The commander selects the AOI based on the estimate of the situation. The dimensions are not constrained by the organic ability to acquire information on that area. The AOI must extend, in as irregular a shape and as far as needed, in all directions to safeguard the command from surprise (see fig. 5-2). The AOI must be viewed in terms of width, depth, height or airspace, and time.

Battlespace

The battlespace is all aspects of air, surface, subsurface, land, and space, as well as the electromagnetic spectrum, the information environment, and other dimensions which encompass the AO, the area of influence, and the AOI. Figure 5-3 depicts many of these battlespace dimensions and factors.

Establish the Area of Interest Limits

The AOI is the geographical area from which information and intelligence are required to permit planning or successful conduct of the command's operation. The command's AOI is generally larger than its AO. The limits of the AOI include each of the characteristics of the battlespace environment identified as exerting an influence on potential COAs or command decisions.

The limits of the AOI are based on the ability of the threat to influence the accomplishment of the command's mission. The geographical locations of other activities or characteristics of the environment that might influence COAs or the commander's decision and the resulting changes in the command's battlespace must be considered when establishing AOI limits.
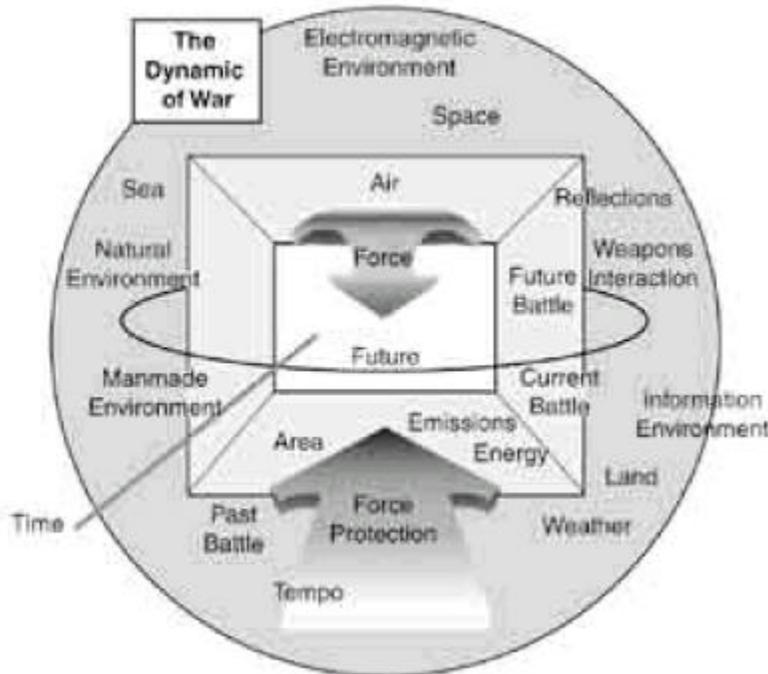
Figure 5-3. Battlespace Dimensions and Factors.

Areas of interest can be divided into several components (e.g., ground, air, political). Altitude must be considered in the air AOI when the projection of air power is of interest. When an air defense-related IPB is conducted, the AOI should extend upwards to the maximum service ceiling of the threat's aircraft. When an aviation-related IPB is conducted, the AOI should extend to the maximum service ceiling of friendly aircraft or the maximum effective altitude of threat air defense systems, whichever is greater. When space-based IPB is conducted, the AOI must extend to the maximum effective altitude of relevant space-based systems. Although AOIs may be developed separately, at some point they must be considered as an integrated whole.

One of the primary considerations in establishing the limits of the AOI is time. The time limit is based on the threat's ground and air mobility and the amount of time needed to accomplish the friendly mission. For missions of relatively short duration, such as the evacuation of noncombatants or raids, the AOI may be relatively small and usually includes only immediate, direct threats to mission accomplishment. A helicopter raid where the MAGTF has air superiority might have an AOI that includes only air defense systems within the range of the engagement area and the air routes. Some long-term missions, such as peacekeeping, will result in an extensive AOI that considers political, economic, and conventional military factors.

Since the limits of the AOI are based on threats to mission accomplishment rather than strictly terrain considerations, the limits may cross into neutral countries. If developments in a neutral country might influence accomplishment of the unit's mission, that country must be included in the AOI.

Identify the Detail Required for the Time Available

The time available for completion of the IPB process may not permit the luxury of conducting each step in detail. The focus must be on the parts of IPB that are most important to the commander in planning and executing the mission. Identifying the amount of detail required avoids wasting time on developing more detail than necessary in each step of the process. For example, the situation may require detailed threat analysis only on selected areas within the command's AO based on the assigned mission or other METT-T factors. Some geographical areas or threat forces within the AO may require only a summary type evaluation of their effects or capabilities.

Evaluate Existing Intelligence Data Bases and Identify Intelligence Gaps

Data bases may only contain some of the intelligence and information required to evaluate the effects of each battlespace characteristic and each threat force. This is especially true of the majority of countries where the MAGTF may conduct operations in the future. Identifying the intelligence gaps early allows the intelligence analysts to initiate action required for collecting intelligence and filling the gaps, to perform the necessary production, and to disseminate the intelligence products in a timely manner. When evaluating existing data bases, intelligence analysts must—

- Identify and prioritize the intelligence gaps in current holdings, using the commander's PIRs and intent to set the priorities.
- Identify any gaps that cannot be filled within the time allowed for IPB.
- Inform the commander and operators of unfilled gaps so that reasonable assumptions can be formulated.

Collect the Required Intelligence and Materials

Ideally, intelligence operations enable the analyst to develop estimates of the battlespace and the threat that match the actual situation. In reality, intelligence will never eliminate the unknown aspects or uncertainties that concern a commander and staff. Intelligence analysts must be prepared to fill in the gaps with reasonable assumptions and estimates. When collecting the required intelligence and materials, intelligence analysts must—

- Initiate collection or requests for intelligence to fill the gaps and to conduct IPB.

- Prioritize collection against all identified significant characteristics of the battlespace.

- Initiate action on identified IPRs and continuously update the IPB products as additional intelligence is received.

- Inform the commander as assumptions are confirmed during the initial mission analysis and IPB process.

- Re-examine the evaluations and decisions on which proven invalid assumptions were based.

SECTION II. STEP 2—DESCRIBE THE BATTLESPACE EFFECTS

The second step in the IPB process is to determine how the battlespace environment affects both threat and friendly operations. This evaluation step begins with an analysis of existing and projected conditions of the battlespace environment and determines how those conditions will affect friendly and threat operations and broad COAs. Intelligence analysts describe the battlespace effects by analyzing the battlespace environment, such as terrain, weather, and other battlespace characteristics, and by describing the battlespace effects on threat and friendly capabilities and broad COAs.

Analyze the Battlespace Environment

The degree of detail in the analysis varies depending on the area of the battlespace environment being evaluated. Generally, the AO is evaluated in more detail than the AOI. Additionally, the focus varies throughout each area. For example, rear areas within the AO may require a different focus than areas near the main battle area. Certain areas or subsectors affect various types of operations to varying degrees. During the evaluation, intelligence analysts must identify areas that favor each type of operation (e.g., offensive, defensive, force protection, peace enforcement). Terrain, weather, and other characteristics of the battlespace are analyzed as part of the IPB process.

Terrain

Terrain analysis is the means to determine which friendly COAs can best exploit the opportunities the terrain provides and how the terrain affects the threat's available COAs. The best terrain analysis is based on a reconnaissance of the AO and AOI. Analysts must identify gaps in knowledge of the terrain that a map analysis cannot satisfy and use the identified gaps to guide reconnaissance planning and to focus on areas most important to the commander and the mission.

The members of intel bn's topographic platoon usually conduct the major portion of the terrain and hydrographic analysis and development of supporting GEOINT products. They also receive

support from Army topographic units operating as part of or in support of the joint force. Topographic personnel work closely with weather personnel and weather analysts to ensure that terrain analysis incorporates the effects of current and projected weather events.

The National Imagery and Mapping Agency (NIMA) produces specialized maps, overlays, and automated data bases for specified areas of the world to aid in map-based evaluations. The tactical terrain analysis data base consists of selected terrain information that is limited to natural and manmade features of tactical military significance, which can be exploited by terrain analysts to satisfy military requirements. Specialized NIMA products address—

- Cross-country mobility.
- Transportation systems (road and bridge information).
- Vegetation type and distribution.
- Surface drainage and configuration.
- Surface materials (soils).
- Ground water.
- Obstacles.

Terrain analysts must ensure that the analysis includes the effects of existing and forecasted weather on the military aspects of the terrain, because changes to the battlespace environment may change the terrain analysis evaluation results. Analysts express the results of evaluating the terrain's effects by identifying areas of the battlespace that favor, disfavor, or do not affect each broad COA. These conclusions are reached through analysis of the military aspects of the terrain and evaluation of the terrain's effects on military operations.

Analyze the Military Aspects of the Terrain

Terrain analysts evaluate the following military aspects of terrain to determine the effects on military capabilities:

- Key Terrain—Any locality or area (natural or manmade) that the seizure, retention, or control of will afford a marked advantage to either combatant.

- Observation and Fields of Fire—Observation is the ability to see the threat either visually or through the use of surveillance devices. Fields of fire are areas that a weapon may effectively cover with fire from a given position.

- Cover and Concealment—Cover is protection from the effects of direct and indirect fires. Concealment is protection from observation. Ditches, caves, river banks, folds in the ground, shell craters, buildings, walls, embankments, woods, underbrush, and other natural or manmade features can provide cover and/or concealment.

- Obstacles—Any natural or manmade feature that stops, impedes, slows, or diverts military movement.

- Avenues of Approach and Mobility Corridors—Avenues of approach (AAs) are air, sea or ground routes of an attacking friendly or threat force of a given size leading to its objectives or to key terrain in its path (see figs. 5-4 below and 5-5 on page 5-8). Mobility corridors are areas where a force will be
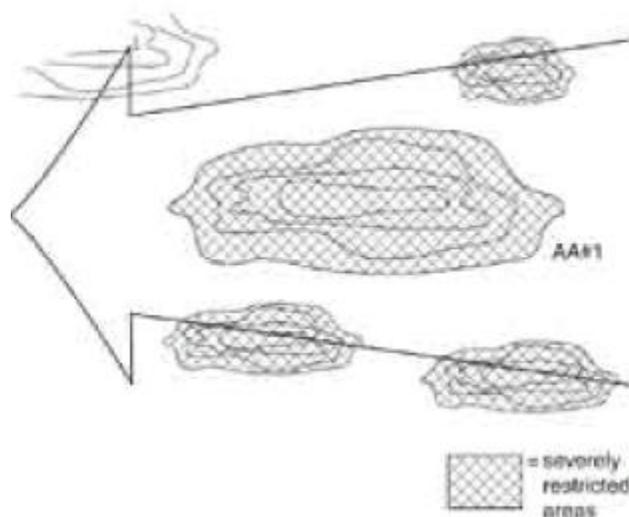
Figure 5-4. Regimental Ground AA.
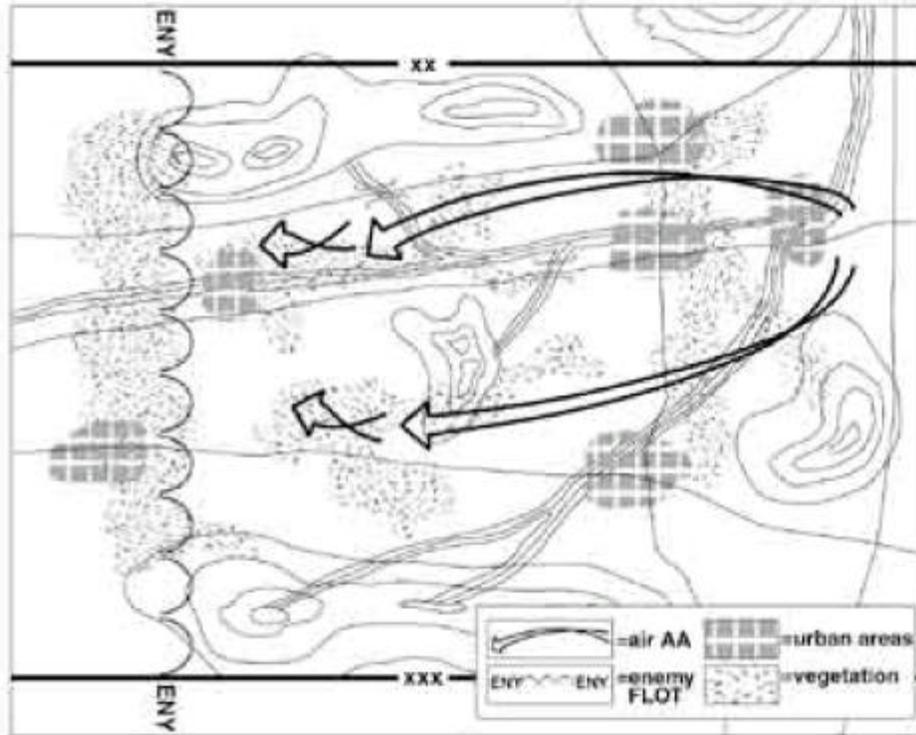
Figure 5-5. Air AAs Overlay.

canalized due to terrain restrictions. A mobility corridor is relatively free of obstacles and wide enough for maneuver of tactical formations, which allows military forces to capitalize on the principles of mass and speed. When grouped together, mobility corridors constitute an AA (see fig. 5-6). Based on previous terrain analyses, the analyst determines how the terrain will allow maneuver to objectives. Analysts must consider littorals/waterways (e.g., beaches, rivers) as possible mobility corridors and AAs.

Evaluate the Terrain's
Effects on Military Operations

Terrain analysts evaluate the terrain's effects on friendly and threat offensive and defensive COAs by identifying the areas along each AA best suited for use as potential—

● Engagement areas and ambush sites—Using results of concealment and cover evaluation, terrain analysts identify areas where maneuvering forces are vulnerable to fires. They consider ranges of weapons, flight times of missiles, and the likely speed of maneuvering forces. If the unit is attacking, analysts identify areas where the unit will be vulnerable to threat fires. If the unit is defending, analysts identify potential engagement areas (see fig. 5-7).

● Battle positions—These positions may be used by friendly attacking forces to block enemy counterattacks. Terrain analysts identify concealed and covered positions that offer observation and fields of fire into potential engagement areas. If a command is defending, these positions are potential defensive positions; if a command is attacking, the positions provide a start point for determining possible threat COAs.
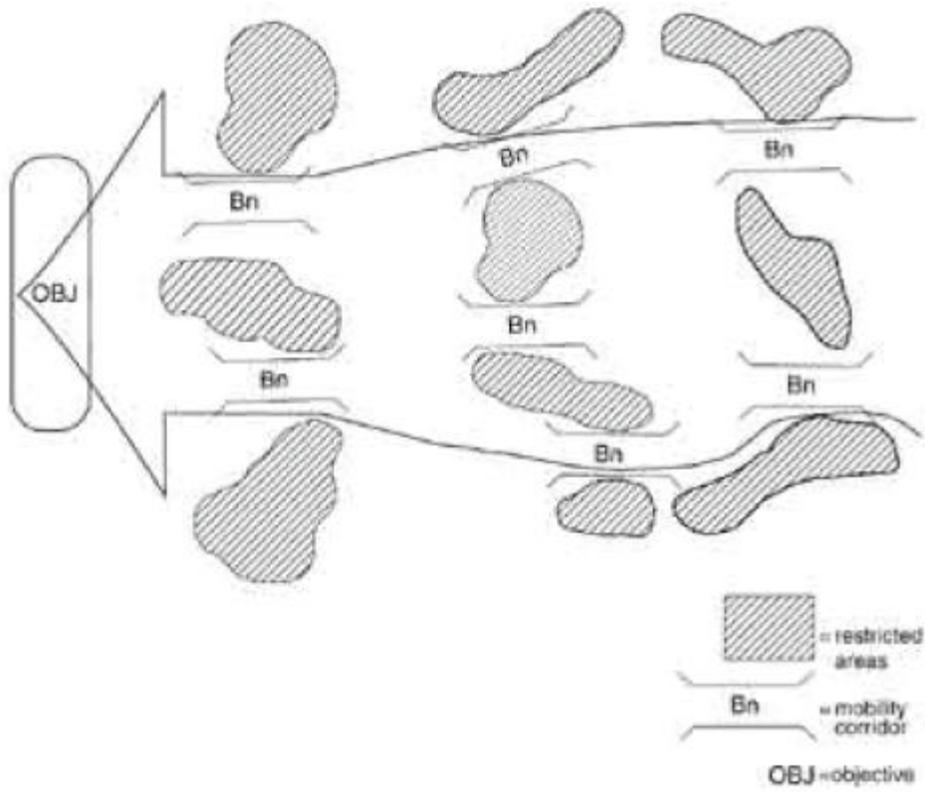
Figure 5-6. Mobility Corridors Grouped to Form an AA.
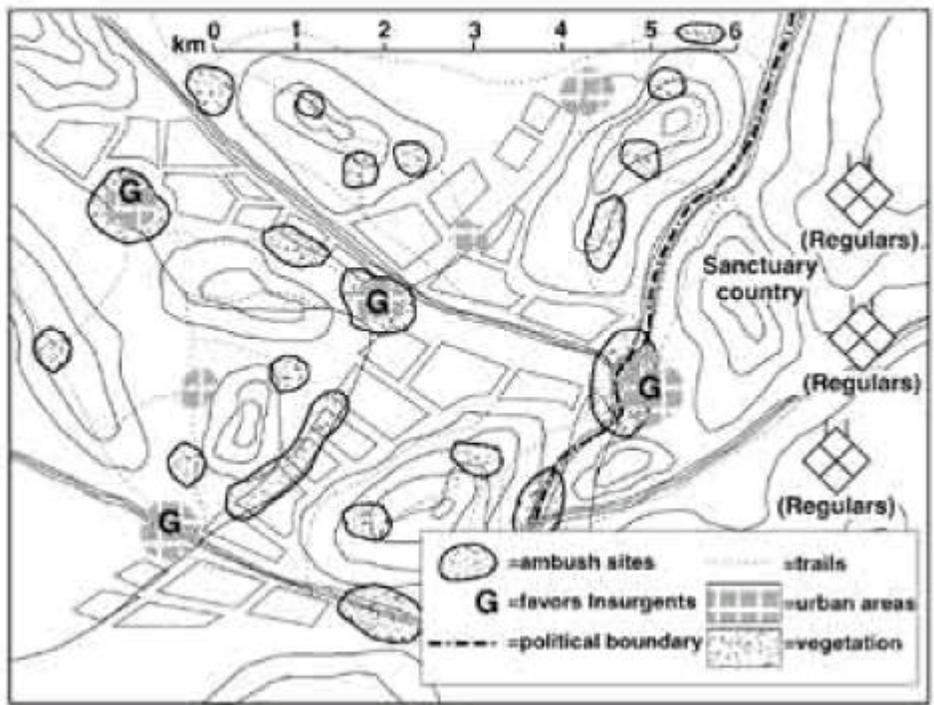
Figure 5-7. Lines of Communications and Likely Ambush Sites.

● <u>Immediate or intermediate objectives</u>—Terrain analysts identify any areas or terrain features that dominate AAs or assigned objective areas. These areas usually correspond to areas already identified as key terrain. As time permits, or situation requires, analysts also identify potential assembly and dispersal areas, observation posts, artillery and air defense positions, LZs, and DZs.

The terrain rarely favors one type of operation throughout the width, depth, and height of the battlespace. Based on the location and nature of the potential engagement areas and battle positions, analysts determine which areas of the battlespace favor attack or defend COAs.

Analysts consider all terrain factors in any order that best supports their analysis, but must focus on the factors most relevant to the specific situation and needs of the commander. To aid the commander's staff in the completion of their estimates and plans, analysts construct a combined obstacle overlay (COO) or a modified combined obstacle overlay (MCOO), which are graphic products that depict battlespace effects on military operations (see fig. 5-8).

Weather

Commanders can take advantage of the weather or minimize its effects through planning based on a weather analysis. During the weather analysis step, weather is studied to determine how it affects friendly and enemy capabilities to move, shoot, and communicate. Terrain and weather are inseparable factors of tactical intelligence and must be integrated. Weather forecasts and assessments contribute to intelligence and must be considered when commanders develop their COAs. The type and amount of weather support needed for a particular mission depends on the mission, the forces, the terrain, and the enemy.
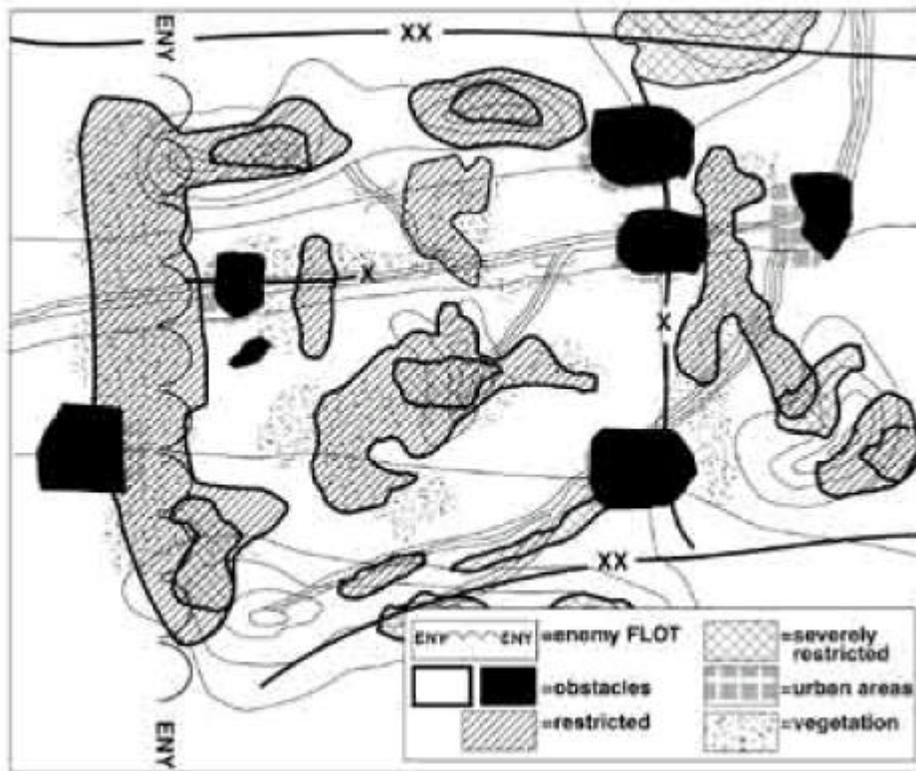
Figure 5-8. Combined Obstacle Overlay.

Evaluation of the direct effects of weather begins by establishing critical values for each aspect of the weather's effects on personnel, equipment (to include all sensors), and military operations the command may be required to perform. Unit intelligence officers and operations personnel develop detailed critical value tables for their units as part of the IPB process. These critical values are used to measure the effects of local weather on both friendly and enemy military operations. See appendix B for an example of a weather critical values table. Weather analysis is covered in more detail in chapter 6 and in Marine Corps Warfighting Publication (MCWP) 3-35.7, *MAGTF Meteorological and Oceanographic Support*. Weather analysis is accomplished by analyzing the military aspects of weather and evaluating the weather's effects on military operations.

Analyze the Military Aspects of Weather

Analysts consider the following five military aspects of weather:

- Temperature and humidity.
- Precipitation.
- Wind.
- Visibility.
- Clouds.

Evaluate the Weather's Effects on Military Operations

Weather has both direct and indirect effects on military operations. Examples of indirect effects include—

- Temperature inversions that might cause some battle positions to be at risk to the effects of chemical warfare.

- Local conditions of visibility, such as fog, that might make some potential engagement areas attractive.
- Hot, dry weather that might force a unit to consider water sources as key terrain.

Other Characteristics of the Battlespace

These characteristics include all aspects of the battlespace environment that affect friendly and threat COAs not incorporated into terrain and weather analysis. For example, an intelligence officer may report that religious considerations will make cordon and search operations on Wednesdays difficult to execute since the local population will be praying at the time of the scheduled search. Examples of other characteristics include—

- Logistic infrastructure (e.g., land use patterns, sources of potable water, bulk fuel storage, natural resources, industries and technologies, chemical and nuclear facilities).
- Population demographics (e.g., living conditions, cultural distinctions, religious beliefs, political grievances, political affiliation, education levels).
- Naval approaches.
- Economics.
- Local, regional, and international politics (e.g., treaties, agreements, legal restrictions, unofficial systems, gangs).

Although effects of other characteristics are usually discussed in text or matrix form, analysts should use graphics wherever possible. Examples of graphic depictions include an overlay showing areas most vulnerable to insurgent activity based on demographic distribution or an overlay showing high-value targets (HVTs) in the logistic infrastructure.

Describe the Battlespace Effects on Threat and Friendly Capabilities and Broad Courses of Action

Intelligence analysts combine the evaluation of the effects of terrain, weather, and other characteristics of the battlespace into one integrated product. They focus on the total environment's effects on COAs available to both friendly and threat forces.

Prior to development of friendly COAs, intelligence analysts provide the operations officer or planning staff with the following IPB products:

- An evaluated and prioritized set of AAs to assist in the designation of axis of advance, direction of attack, or zone of attack for each subordinate unit in offensive operations.
- Sets of defensible terrain along threat AAs to assist in the development of strongpoints, battle positions, or sectors for each subordinate unit in defensive and retrograde operations.
- Periods when weather conditions will optimize the use of friendly target acquisition and aviation operations to help time operations.

After the development of friendly COAs, intelligence analysts provide an evaluation of how each COA does or does not use the opportunities the battlespace provides. When addressing effects on threat COAs, intelligence analysts should view capabilities from the perspective of the enemy. The evaluation of the battlespace effects on the threat must be tailored to include weather and terrain that may affect threat weapon systems, vehicles, and personnel differently than friendly personnel. Operations and planning staffs must understand these battlespace effects on the threat to avoid assumptions that the battlespace will affect both forces equally. Other characteristics may influence threat actions more than weather and terrain, and cultural biases may cause threat personnel to view legal, political, economic, and demographic issues in an entirely different manner than friendly personnel would.

When describing the battlespace effects on threat and friendly capabilities and broad courses of action, intelligence analysts must—

- Evaluate the battlespace from the perspective of the threat.
- Express the evaluation in terms of COAs, not detailed descriptions of the analytical factors that led to the conclusions.
- Focus the commander by relating specific threat activities in both time and space.
- Back their conclusions with the detailed analysis performed.
- Communicate final conclusions in written reports such as the analysis of the AO or intelligence estimate.
- Disseminate graphic products developed during the analysis and evaluation to the staff and other commands for use in their own IPB and planning efforts.

SECTION III. STEP 3—EVALUATE THE THREAT

The third step in the IPB process is to determine the threat force capabilities and the doctrinal principles, tactics, techniques, and procedures it has historically used. This involves a detailed study of the threat's composition, tactical doctrine, procedures, weapons and equipment, and supporting systems. The intelligence section determines threat capabilities and how the threat operates by updating or creating threat models and identifying threat capabilities.

Update or Create Threat Models

Threat models depict how threat forces prefer to conduct operations under ideal conditions. They are based on the threat's normal or doctrinal organization, equipment, tactics, techniques, and procedures. Threat models result from a detailed study of the threat force. Ideally, threat models are constructed prior to deployment. Threat models consist of doctrinal templates, a description of preferred tactics and options, and identification of HVTs.

Doctrinal Templates

Doctrinal templates illustrate the deployment pattern and disposition preferred by the threat's normal tactics when not constrained by the effects of the battlespace environment. They are usually scaled graphic depictions of threat dispositions for a particular type of standard operation, such as a battalion moving to contact or an insurgent ambush (see fig. 5-9).

Doctrinal templates must be tailored to the needs of the unit or staff section creating them. Templates are constructed through an analysis of intelligence data bases and an evaluation of the threat's past operations. The analysis should focus on patterns in task organization, timing, distances, relative locations, groupings, and the use of terrain and weather. Some doctrinal templates consider the threat force as a whole, while others focus on a single battlefield function like intelligence or fires.

Description of Tactics and Options

The threat model includes a description of the threat's preferred tactics. It addresses the operations of the major units or elements portrayed on the template and the activities of different battlefield functions. It also contains a listing or description of the options (branches) available to the threat should the operation fail, or
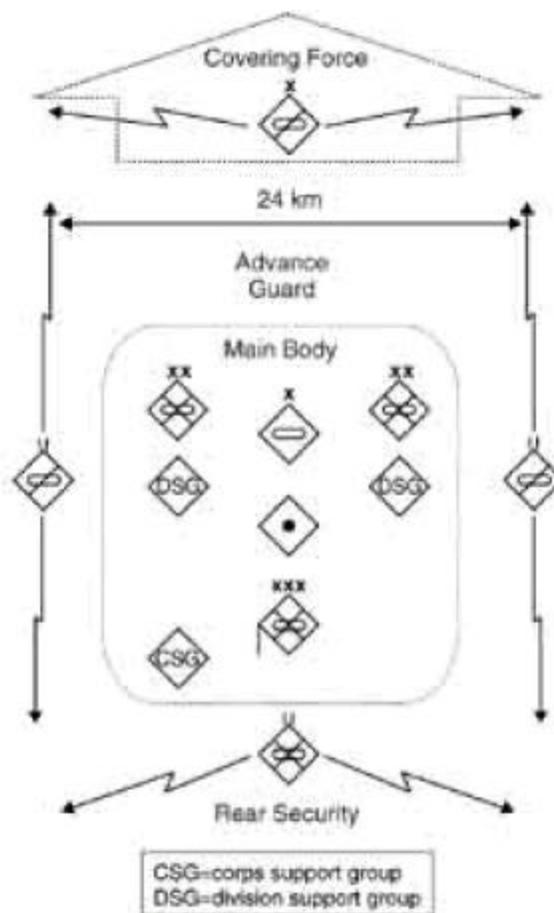
Figure 5-9. Doctrinal Template.

subsequent operations (sequels) if it succeeds. Even if the threat's preferred tactics can be depicted graphically, the threat model includes a description.

The description aids in mentally wargaming the operation over its duration during the development of threat COAs and situation templates. It should address typical time lines and phases of the operation, points where units transition from one formation to another, decision criteria, and each battlefield function's contribution to the operation's success. This analysis of the individual role of battlefield functions, related in time and space, will aid in the later identification of HVTs and HPTs.

Identification of Center(s) of Gravity

Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*, defines a center of gravity (COG) as any important source of strength. It may be mental, moral or physical strength, power or will. COGs may exist at each level of war: strategic, operational, and tactical. It may be tangible or intangible, and there may be multiple COGs. While knowledge of a threat's COGs at all levels is useful, the analyst should focus on the COGs appropriate to the level of operations that concern their friendly force. At this stage of the IPB process, the identification of COGs is an initial assessment.

Critical Vulnerabilities

Aspects of a COG that, if exploited, will do the most significant damage to an adversary's ability to resist are critical vulnerabilities. Vulnerability cannot be critical unless it undermines a key strength. Some vulnerabilities may contribute significantly to the enemy's downfall while others may lead only to minimal gains. Therefore, analysts must focus on a vulnerability that will do the most damage to the enemy's ability to resist.

Identification of Type High-Value Targets

Assets that the threat commander requires for the successful completion of the mission depicted and described on the template are HVTs. Examples of type HVTs include C2, intelligence, fire support, communications and information systems, air defenses, engineers, and logistics and CSS. When evaluating the threat, intelligence analysts must—

● Identify HVTs from an evaluation of the data base, the doctrinal template, the template's supporting narrative, and the use of tactical judgment.

● Develop the initial list of HVTs by mentally wargaming and thinking through the operation to identify assets that are critical to the

operation's success, particularly at critical junctures or phases.

● Identify assets, which are key to executing the primary operation, particularly those that are key to satisfying decision criteria.

● Group the identified key assets into one of 13 categories used to develop target sets, thus assisting in the development of targeting strategies.

● Determine how the threat might react to the loss of an HVT; consider his ability to substitute other assets or modify his plan to compensate.

● Rank the identified HVTs with regard to their worth to the threat's operation.

● Identify HVT value changes by phase because that value usually varies over the course of an operation.

● Tailor IPB products to the command's needs by concentrating on HVTs that are important to the mission.

Identify Threat Capabilities

Threat capabilities are the broad COAs and supporting operations that the threat can take to influence the accomplishment of the friendly mission. The following four tactical or broad COAs are generally open to military forces in conventional operations:

● Attack.
● Defend.
● Reinforce.
● Retrograde.

Each of these broad COAs can be divided into more specific COAs. An attack may be envelopment, penetration, or other variations of an attack. A retrograde movement may be a delaying action, a withdrawal, or a retirement. Other threat capabilities include support to

broad COAs or specific types of operations, including—

- Deception operations.
- Riverine operations.
- Psychological operations.
- Intelligence operations.
- Nuclear, biological, and chemical weapons employment.
- Espionage, sabotage, subversive, and terrorist operations.

Threat capabilities take the form of statements, such as—

- The enemy has the ability to insert up to two infantry battalions in a single lift operation.

- The enemy can establish a prepared defense by 14 May.
- The demonstrators can effectively block traffic at up to seven intersections in our zone.

When identifying threat capabilities, intelligence analysts—

- Start with developed threat models.
- Consider other types of operations and broad COAs at other levels of war and during operations other than war.
- Consider the threat's ability to conduct each operation based on all factors related to the current situation. (The threat may be understrength in equipment or personnel, short of logistic support, lacking air support, or his troops may be inexperienced or poorly trained.)

SECTION IV. STEP 4—DETERMINE THREAT COURSES OF ACTION

This step of the IPB process is the identification and development of likely threat COAs that will influence the accomplishment of the friendly mission.

Identify the Threat's Likely Objectives and Desired End State

Depending on METT-T, intelligence analysts generally start identifying threat objectives and desired end state of the threat command at least one level above their own command. Analysts repeat the process for the next subordinate level to at least two levels below their own command, ensuring that each threat level's objective will accomplish the likely objectives and desired end state of its parent command. In operations other than war, analysts may be required to start more than one level above their command (e.g., the government or major clan leadership level). Usually, analysts state the threat's objectives and desired end state as assumptions. The analysts must make sure the

assumptions are clearly identified as such and ensure the assumptions are discussed with the commander and staff. During operations other than war, analysts must consider more than the conventional objectives of terrain or friendly forces. This is also true at higher levels of command where the threat's political and economic objectives have a direct influence on his COAs.

Identify the Full Set of Courses of Action Available to the Threat

When identifying the COAs available to the threat, analysts must—

- Consider the COAs that the threat historical doctrine and tactics, techniques, and procedures (TTP) indicate are appropriate to the current situation and the likely objectives identified. This requires an understanding of the threat's decisionmaking process as well as

an appreciation for how he perceives the current situation.

● Consider the threat COAs that could significantly influence the command's mission, even if the threat's doctrine and TTP indicate these as infeasible under current conditions; and consider any indirect COAs that the threat is capable of executing.

● Consider the threat COAs indicated by recent activities and events. To avoid surprise from an unanticipated COA, consider all possible explanations for the threat's activity in terms of possible COAs.

● Consider each COA's subset independently to avoid forming biases that restrict the analysis and evaluation.

● Combine the subsets to eliminate redundancy and minor variations.

● Compare the consolidated list of COAs to threat capabilities identified in step 3 of the IPB process and eliminate any COAs that the threat is incapable of executing.

● Select threat models that will accomplish the threat's likely objectives based on the evaluation of the threat's capabilities.

● Examine how the effects of the battlespace described in step 2 of the IPB process influence the application of COAs (see fig. 5-10).

● Define COAs open to the threat, such as deliberate attack, hasty attack, defend, and delay.

● Define each general COA as a set of specific COAs by integrating the threat models with a description of the battlespace effects.
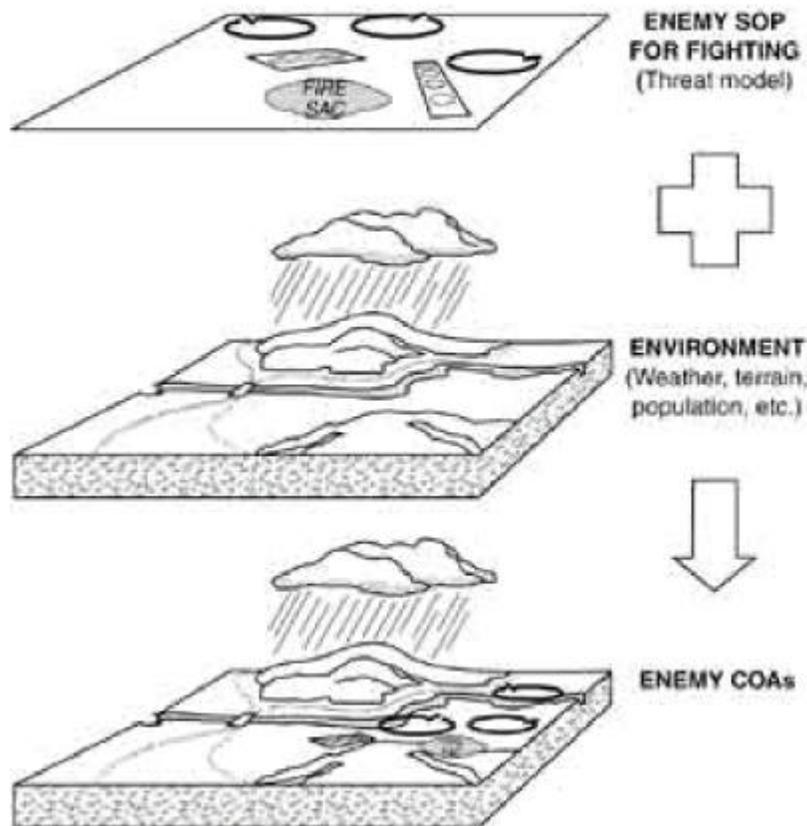
**Figure 5-10. Combining Doctrine and
Battlespace Effects to Develop Threat COAs.**

● Ensure each COA identified is suitable, feasible, acceptable, unique, and consistent with threat doctrine or TTP and recently observed activities and patterns (see figs. 5-11 and 5-12).

Evaluate and Prioritize Each Course of Action

Analysts must evaluate each identified threat COA and prioritize it according to an estimate
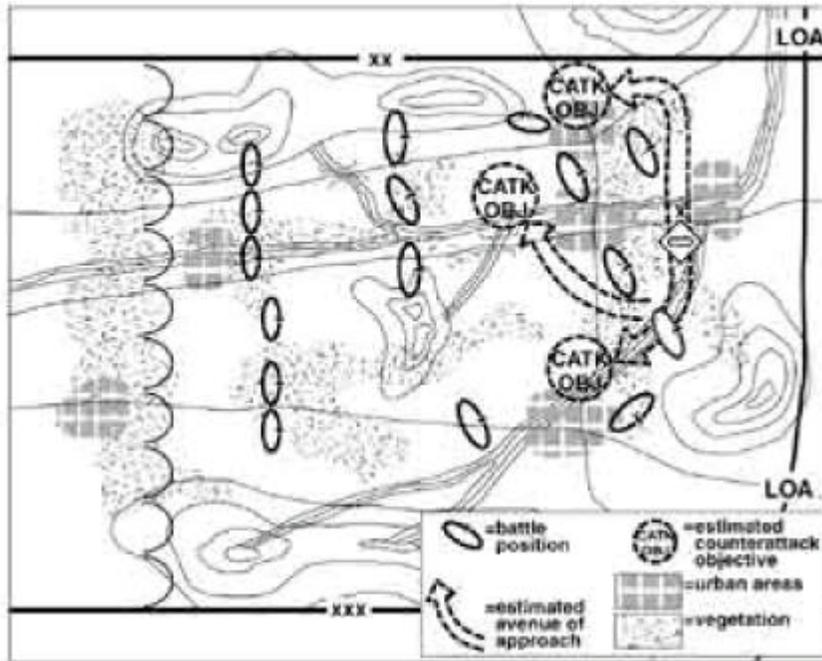
Figure 5-11. Enemy COA 1—Counterattack.
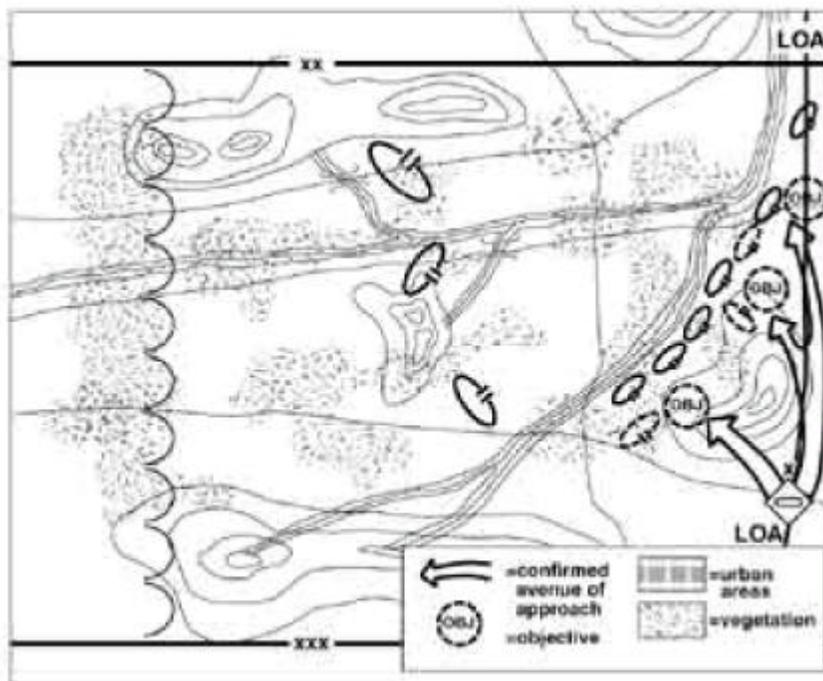
Figure 5-12. Enemy COA 2—Withdrawal from Current

of likely adoption by the threat. The priority list allows the commander and staff to develop a plan for friendly COAs that is based on assumptions about the threat. Once the commander selects a friendly COA, the list may need to be reprioritized to reflect possible reactions to friendly dispositions and activities.

Develop Each Threat Course of Action in the Amount of Detail Time Allows

Once the complete set of threat COAs has been identified, analysts develop each COA in as much detail as the situation requires and time allows. The order in which each COA is developed is based on its probability of adoption and the commander's guidance. To ensure completeness, each COA must answer the following five questions:

● What (type of operation)?

● When (time the action will begin)?

● Where (sectors, zones, axis of attack)?

● How (method by which the threat will employ his assets)?

● Why (objective or end state of the threat)?

When developing each COA, analysts must consider threat forces at least one level above their own command level. For example, a battalion S-2 would consider the COAs available to threat regiments and brigades. This helps account for possible reinforcing forces and the higher threat command's objectives and intent. Generally, analysts consider threat COAs two levels of command below their own command when the MAGTF is in the offense and at least one level below their command when the MAGTF is in the defense. Thus the previously discussed battalion S-2 would depict missions and actions down to the platoon level.

Each developed threat COA has a situation template; a COA description, COGs, critical vulnerabilities, and options; and a listing of HVTs.

Situation Template

Situation templates are graphic depictions of expected threat COAs (see fig. 5-13). Templates usually depict the most critical point in the operation as agreed upon by the G-2/S-2 and G-3/S-3. An analyst may prepare several templates to illustrate different points of time in an operation, starting with the threat's initial array of forces. These templates are useful in depicting points where the threat may adopt branches or sequels to the main COA, places where the threat is especially vulnerable, or other key points in the battle such as initial contact with friendly forces. Situation templates are used to support staff wargaming and to develop event templates. Analysts construct a situation template by—

● Beginning with the threat model representing the operation under consideration.

● Overlaying the doctrinal template on the products (generally, COO or MCOO) that depict the battlespace environment's effects on operations.

● Adjusting the dispositions portrayed on the doctrinal template based on the battlespace environment's effects.

● Viewing the situation from the threat commander's point of view when selecting from among available options.

● Checking the situation template to ensure that all the threat's major assets have been accounted for, particularly the locations and activities of the HVTs listed in the threat model.

● Evaluating time and space factors to develop time phase lines (TPLs) to depict threat movement. The TPLs can be refined during wargaming (see fig. 5-13).
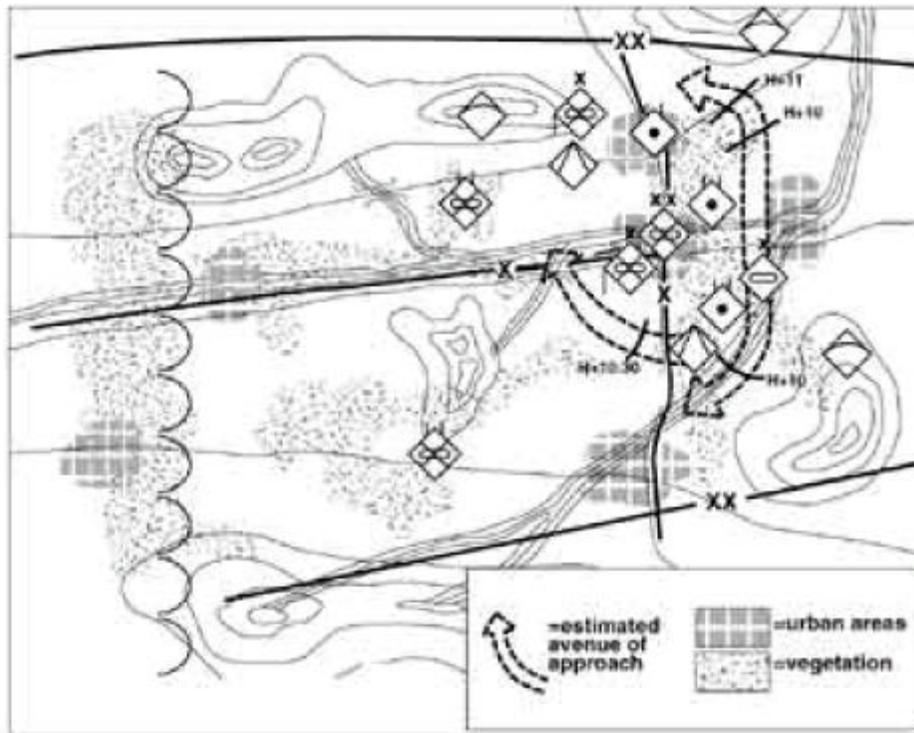
Figure 5-13. Counterattack Situation Template with TPLs and HVTs.

Description of the Threat's Courses of Action and Options

This is a description of the forces' activities depicted on the situation template. It can range from a narrative description or a combined graphics overlay or text matrix (see fig. 5-14 on page 5-20) to a detailed intelligence synchronization matrix depicting the activities of each threat unit and battlespace function in detail (see fig. 5-15 on page 5-20). The COA description supports staff wargaming and the development of the event template and supporting indicators. When preparing the description, analysts mentally war game the COA and attempt to tie threat actions and decisions to both time and space. The description should address the—

● Earliest time the COA can be executed.

● Threat COGs.

● Time lines and phases associated with the COA.

● Decisions the threat commander will make during and after execution of the COA.

Intelligence synchronization is more than simply ensuring that collection systems are operating 24 hours a day. The G-2/S-2 must plan and direct the intelligence system, receive the information it produces, process it, and then produce and disseminate intelligence of value to commanders and planners in time to support their decisions. The coordination of this entire cycle is intelligence synchronization. The IPB process provides the products and tools the G-2/S-2 needs to quickly evaluate incoming information and intelligence as it relates to the command's IPRs and IRs, intelligence synchronization matrix, and the decision support template (DST). These products and tools support the commander's decisions during COA execution and help the commander to quickly confirm or deny the assumptions used during COA wargaming. During operations, the commander and staff track the DST and the intelligence synchronization matrix against incoming intelligence and other tactical reports. As the commander and staff near each decision point, they look to the G-2/S-2 for the intelligence that supports that decision.

Description:
- Defense in two echelons with a reserve.
- Local counterattacks to restore defensive positions.
- Tank battalion counterattacks if defense compromised.
- Detailed and coordinated fire support plan supporting defense and counterattack.
- They prefer obstacle systems (usually minefields) that turn enemy forces into their engagement areas. They seldom employ fixing, blocking, or disrupting obstacles.
- Surface-to-air missiles usually deploy forward with companies. Antiaircraft artillery usually protects battalion assets.

Failure Options:
- Local counterattacks.
- Counterattack by division reserve.
- Withdraw.

Figure 5-14. Threat COA Overlay with Text Description.

TIME	T + 10	T + 24	T + 36	T + 48
Friendly Event	penetrate 80th Corps	shape 90th Corps	shape 90th Corps	shape reserve
Threat Event		reserve departs assembly areas	reserve deploys combat formation	Corps artillery forward deploys
Decision Points	shift main effort to aviation combat element		shift shaping actions	
Intelligence Event (PIR)	NAI 24-will the reserve reinforce 90th Corps	NAI 1-identify reserve HVT AA	NAI 2-identify reserve HVT locations	NAI 3-identify Corps artillery refueler locations
Intel and Recon Collectors	JSTARS / Force Recon / UAV/ATARS / Ground Sensors	JSTARS / Rivet Joint / Radio Battalion		JSTARS / Force Recon / Senior Scout / UAV/ATARS

Figure 5-15. Intelligence Synchronization Matrix.

Sometimes a battle progresses in a direction unanticipated during the initial IPB and war-gaming, because the enemy follows his own plans and time lines. As the operation unfolds and the enemy's intentions become clearer, key staff members reinitiate the IPB and decision-making processes and conduct a modified war game as needed. During these sessions, the G-2/S-2 reviews and modifies the initial IPB. The battle staff then war games the best friendly response or preemptive action based on the updated set of IPB predictions. New decisions and COAs lead to updating and refining the collection plan, intelligence synchronization, and new decision support tools.

The intelligence synchronization matrix and other intelligence tools are consolidated and displayed within the current operations center to provide all watch leaders and personnel with critical current intelligence operations information. This tool is called the intelligence synchronization sheet, which is tailored to the command echelon or C2 node being supported (see fig. 5-16). Generally, the intelligence synchronization sheet includes lists of—

- Threat objectives and battlespace conditions.
- Current PIRs.
- Anticipated critical threat events, critical intelligence actions, and likely threat activities.
- Targeting priorities.
- Intelligence support priorities.
- Key intelligence collections, production, and dissemination activities.

High-Value Targets

While preparing and mentally wargaming the situation template, the analyst notes how enemy systems provide critical support to the COA. This
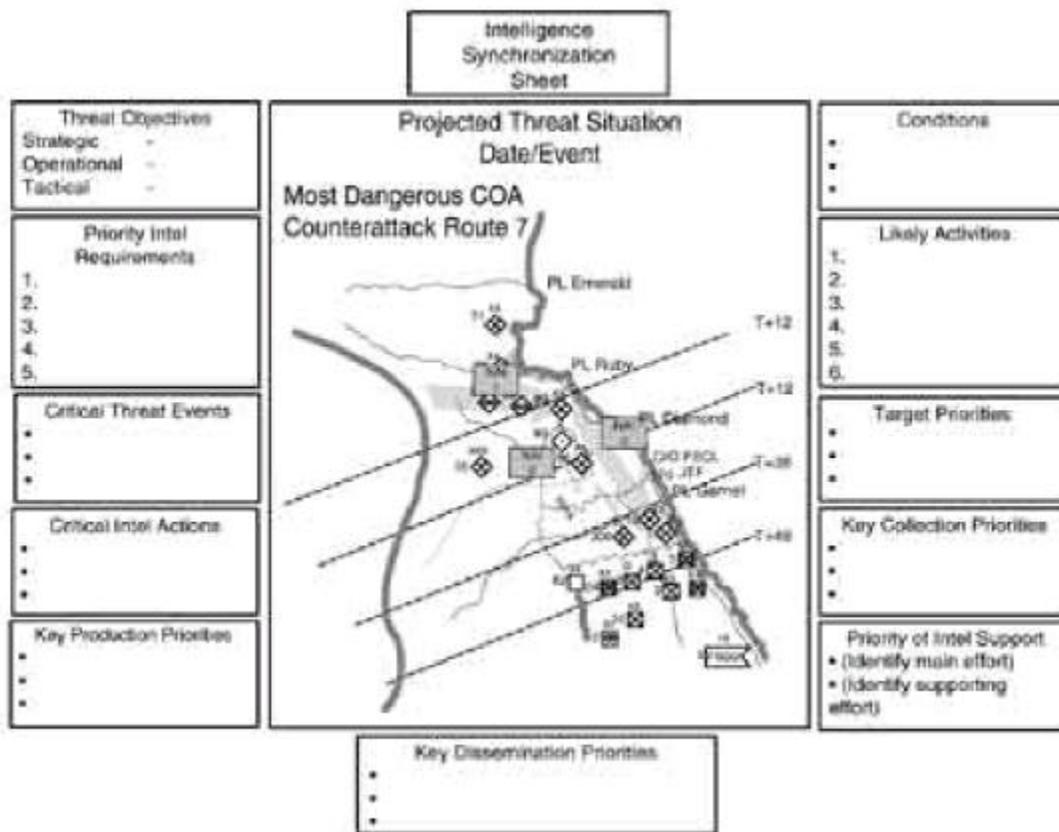
Figure 5-16. Intelligence Synchronization Sheet.

exercise leads to identification of HVTs that may be COGs, critical vulnerabilities, or assets, which if destroyed or neutralized may allow friendly forces to attack a COG or critical vulnerability. Once the HVTs list is compiled, analysts—

● Use the list in the threat model as a guide.
● Determine the effect on the COA of losing each HVT and identify likely threat responses.
● Identify the times or phases in the COA when the target is most valuable to the threat commander and make the appropriate notations on the list of HVTs.
● Transfer the refined and updated list of HVTs to the situation template (see fig. 5-17). The list will support staff wargaming and the targeting process.
● Note on the situation template any areas where HVTs must appear or be employed to make the operation successful.
● Focus on HVT locations at the times they are most valuable or just before. These are potential targeted areas of interest (TAI) and en-

gagement areas that will be refined and used by the G-3/S-3.

Identify Initial Intelligence Collection, Production, and Dissemination Requirements

After identifying potential threat COAs, the analyst must determine which one the enemy will adopt. Initial collection requirements are designed to help answer the challenge. The identification of initial ICRs revolves around predicting specific areas and activities, which, when observed, will reveal which COAs the threat has chosen. The area where the analyst expects key events to occur is designated an NAI. The activities that reveal the selected COA are called indicators. Identified IPRs support prioritization and planning of necessary intelligence products, and identified IDRs support prioritization and planning for the eventual
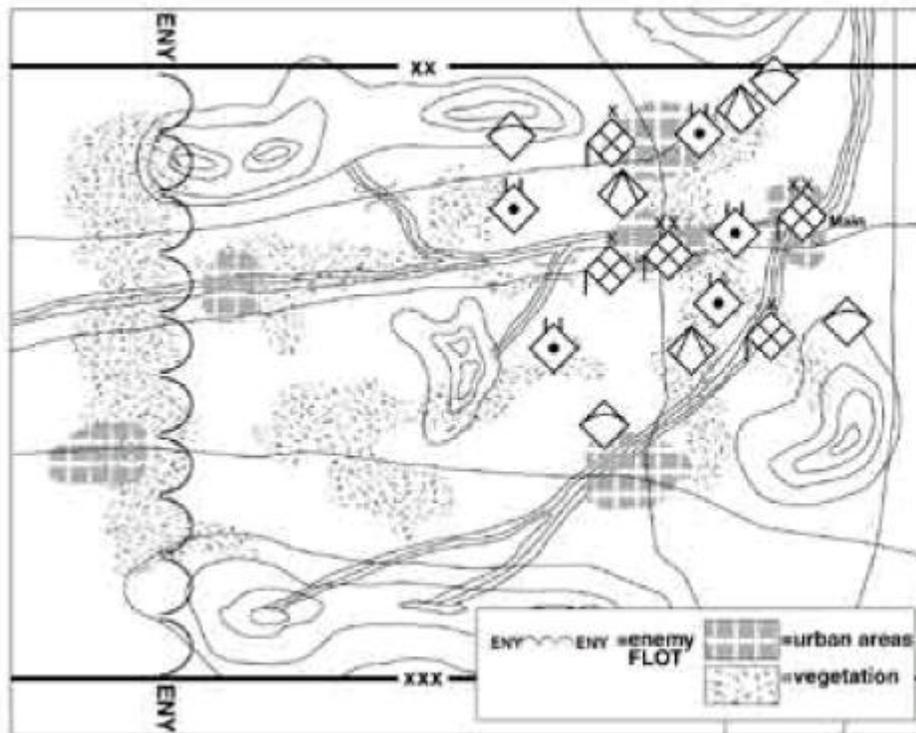
Figure 5-17. Templated Locations of HVTs for Enemy COA 1.

dissemination of intelligence products, such as the event template and event matrix, to commanders and staff sections needing them.

The event template and matrix form the basis for planning integrated collection, production, and dissemination strategies, and synchronize friendly intelligence operations. They enable the G-2/S-2 to develop precise ICRs, IPRs, and IDRs by maximizing the effectiveness of limited resources over extended areas against a vast array of threat targets.

Event Template

The differences between the NAIs, indicators, and TPLs associated with each threat COA form the basis of the event template (see fig. 5-18). The event template is a guide for collection, reconnaissance, and surveillance planning. It depicts where to collect information that will indicate which COA the threat has adopted.

Analysts evaluate each threat COA to identify its associated NAIs. They mentally war game execution of the COA and note places where activity must occur if that COA is adopted. Intelligence analysts must pay particular attention to times and places where the threat's HVTs are employed or areas where HVTs can be easily acquired and engaged. Analysts must also consider places where the threat is expected to take actions or make decisions, such as adoption of a branch plan or execution of a counterattack. These areas will evolve into NAIs in support of targeting.

An NAI can be a specific point, a route, or an area. They can match obvious natural terrain features or arbitrary features, such as TPLs or engagement areas. Analysts must make the NAIs large enough to encompass the activity that serves as the indicator of the threat's COA.

Intelligence analysts compare, contrast, and identify the differences between each COA's NAIs
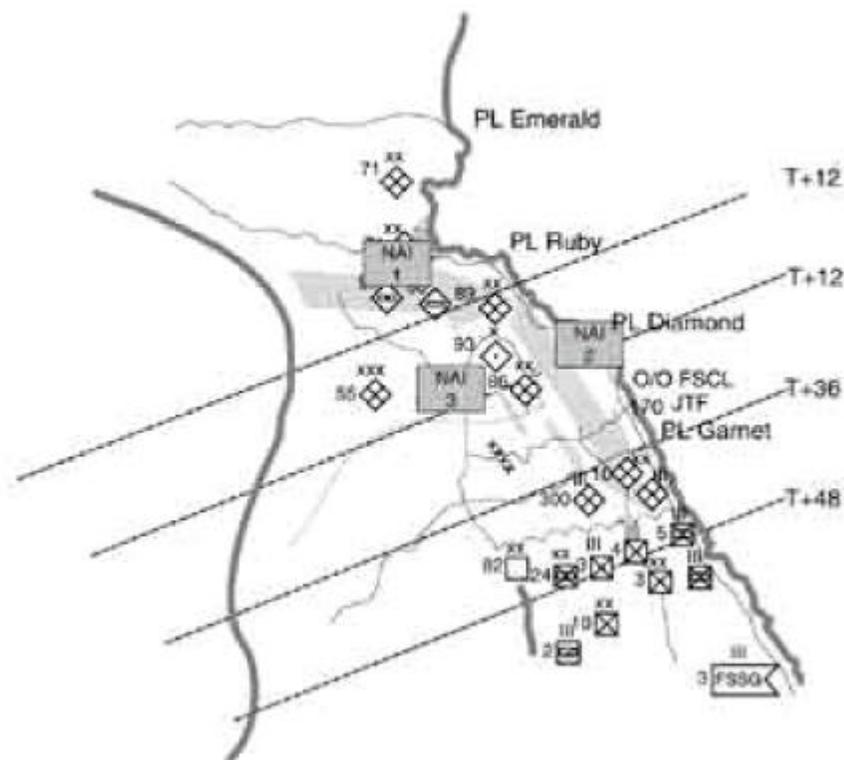
Figure 5-18. Event Template.

and indicators, concentrating on the differences that will provide the reliable indications of COA adoption. Selected NAIs are marked on the event template. The initial event template focuses on identifying which of the predicted COAs the threat has adopted. Analysts update and refine the event template and its supporting matrix to support friendly decisions identified during staff wargaming (see fig. 5-19).

Event Matrix

The event matrix supports the event template by providing details on the type of activity expected in each NAI, the times the NAI is expected to be active, and the relationship of the activity to other events on the battlefield. Primarily used in planning intelligence collection, the

event matrix also serves as an aid to situation development (see fig. 5-20).

When preparing the event matrix, intelligence analysts—

- Examine the events associated with each NAI on the event template and restate them in the form of indicators.
- Enter the indicators along with the times the indicators are most likely to occur by using TPLs from the situation template or the description of the COA to establish the expected times.
- Record the latest-time-information-of-value time line, if available, based on the expected flow of events, as a guide for the collection manager.
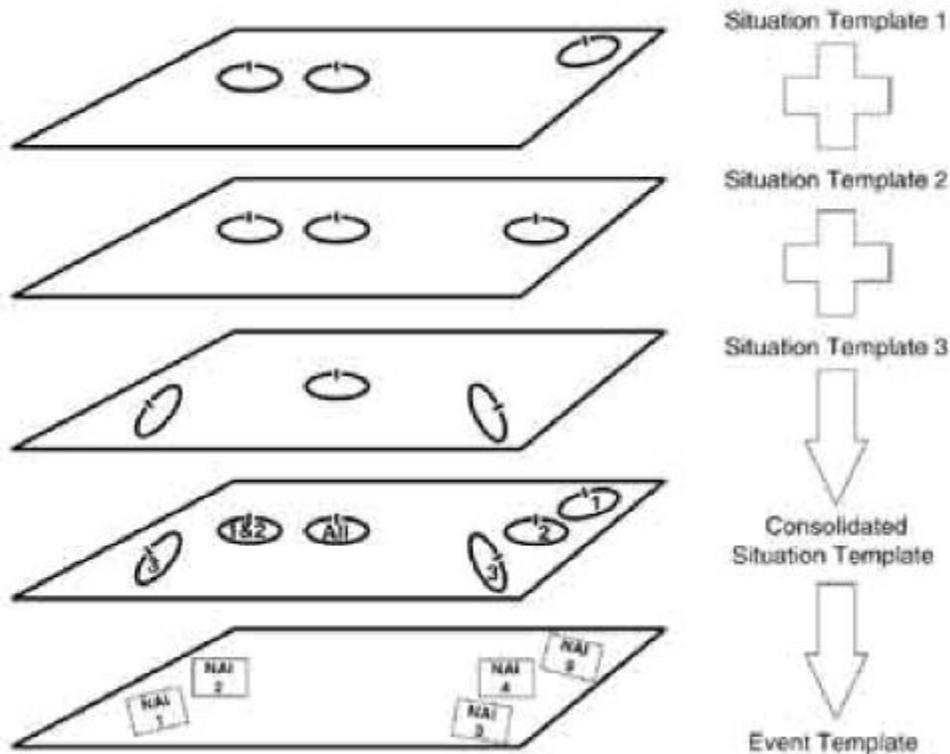
Figure 5-19. Event Template Development by Comparing and Contrasting Each COA's NAIs and Indicators.

NAI	Estimated Time	COA Indicators	COA 2 Indicators	COA 3 Indicators	Other COA Indicators
1	H-15		air assault forces		
2	H-15		air assault forces		
3	H-15	air assault forces		air assault forces	
4	H-15		infiltration of light infantry		
5	H-4		light infantry attack		
6	H-4	light infantry attack NAI 7	light infantry attack		
7	H-4	light infantry attack NAI 8		light infantry attack	
8	H-4	poised to attack		light infantry attack	
9	H-4	poised to attack	poised to attack		tank division attacks
10	H-4		poised to attack	poised to attack abreast	tank division attacks
11	H-6			shifts north	
12	H-18				
13	H-18				1 or 2 brigades attack south

Figure 5-20. Detailed Event Matrix for a Specific NAI.

SECTION V. DECISION SUPPORT TEMPLATE

The DST is the capstone product in the staff planning process and the logical conclusion to IPB, although it is not part of the formal IPB process. The DST relates time, space, and threat actions to assist the commander in determining when decisions need to be made, either to employ fires or maneuver forces (see fig. 5-21 on page 5-26). This template helps the commander think ahead in the battle to reduce uncertainty and aids in recognitive or intuitive decisionmaking.

The DST is normally developed during COA wargaming as threat and friendly actions are compared in time and space. Unlike the previous products, the DST is a staff product prepared under the staff cognizance of the G-3/S-3. It reflects the judgment and expertise of the intelligence, maneuver, fires, CIS, and logistic support staffs. The threat COA models, the event template, and event matrix developed during IPB form the basis for and drive wargaming and development of the DST.

Targeted Areas of Interest

Through event templating, identification is made of those areas on the battlefield where significant events and activities will likely occur and where targets will likely appear. As the wargaming process proceeds, the staff identifies areas where the commander can influence the action through fire and maneuver. These areas are designated TAIs. A TAI is an engagement point or area, usually along a mobility corridor, where the interdiction of threat forces by fires, maneuver, or jamming will deprive or reduce a threat capability. It can also cause the threat commander to abandon a particular COA or require the use of unusual support to continue operations. Times and
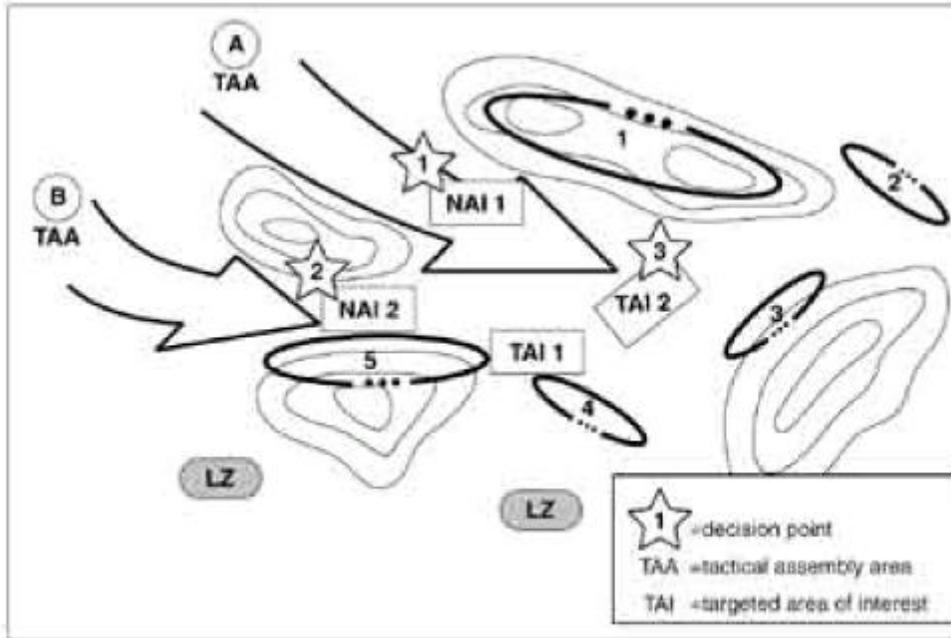
Figure 5-21. Decision Support Template.

locations where HVTs will appear are particularly suited to become TAIs.

The identification of TAIs is a joint effort between the intelligence, operations, and fire support staffs. The intelligence staff identifies the times and places where opportunities present themselves and the effect of interdiction on threat capabilities. The operations and fire support staffs consider the availability of interdiction resources, the effects of interdiction on the accomplishment of the friendly mission, and the priorities for the use of available resources.

Decision Points

Following the selection of TAIs, analysts identify decision points. The location of decision points is largely influenced by the availability and capability of friendly fire and maneuver systems; therefore, decision point selection is primarily a G-3/S-3 function, with support from the fire support coordinator and other key participants in the planning staff.

Types

Decision points identify battlefield events that may require tactical decisions. These points also identify when the tactical decisions must be made for the commander to retain available options. Examples of the types of decisions include—

- Commit the reserve.
- Surge friendly air support.
- Concentrate artillery on TAIs, perhaps in conjunction with electronic attack (EA) operations.
- Deliver scatterable mines.
- Shift the main effort.
- Commence the next phase of an operation.
- Change subordinate unit's overall mission.
- Request assistance from higher headquarters.

Considerations

Decisions must be made early enough to ensure that they can be coordinated across all command echelons and implemented in time to achieve the desired results. The developed NAIs must

provide the required indicators in sufficient time and preciseness to ensure timely decisions.

When identifying decision points, the G-3/S-3 must consider the—

- Time required for intelligence collection, processing, analysis, production, and dissemination to take place.
- Time required to prepare and/or move friendly assets that will execute the mission.

- Activities and movements of the target or threat during the time elapsed between decision and execution.

As the wargaming progresses, a recorder tracks decision points, both by time and location, and develops the synchronization matrix to ensure all battlespace functions are working in harmony toward the same goals. After the commander selects a friendly COA, the intelligence staff develops detailed collection and dissemination plans to support the decision points, NAIs, and TAIs.

SECTION VI. ABBREVIATED INTELLIGENCE PREPARATION OF THE BATTLESPACE PROCESS

Many of the steps involved in IPB are time, labor, and resource intensive, especially at lower tactical echelons where automated systems and personnel support for terrain analysis and other intelligence production functions are usually not available. Those same echelons generally have less time available for the IPB process. Besides the available time, intelligence personnel and resource constraints affect the scope and depth of IPB activities. Consequently, most Marine Corps units use the abbreviated IPB process.

The intelligence product that results from the abbreviated approach is far less than the comprehensive set of previously discussed products. The one-overlay product, when developed to a quality standard and focused on the unit's mission, PIRs, and IRs, has repeatedly proven to be effective on the battlefield. In its most elementary form, the IPB process can be abbreviated by working ahead, focusing on essentials, staying objective oriented, and minimizing essentials.

Work Ahead

When conducting an abbreviated IPB, intelligence personnel should complete as much work ahead of time as possible by—

- Establishing a series of base products, particularly those that deal with the battlespace environment's effects on operations.
- Keeping the products updated by periodic review instead of waiting until receipt of a new mission.
- Updating data bases on potential threats and changing the threat models as intelligence is received that indicates changes or evolution in threat doctrine.
- Conducting periodic reviews to ensure that the base IPB products, such as descriptions of the battlespace environment and the threat, are updated regularly.

- Becoming familiar with the support available from higher headquarters, theater intelligence centers, and Service agencies; knowing how to get needed information and products.

- Submitting PRs for information and intelligence products on areas where the unit is most likely to be employed.

- Developing checklists on how to get support, before, during, and after deployment.

- Maintaining an awareness of plans and priorities for all ICRs, IPRs, and IDRs submitted to higher headquarters.

Focus on Essentials

When starting the IPB effort, intelligence personnel should focus on essentials by—

- Considering the METT-T factors, particularly the factor of time.

- Determining how much time can be devoted to each step of the IPB process, and ensuring that the time line allows for the proper support of the planning and decisionmaking process.

- Deciding which products will be developed and to what degree of detail, and focusing on products most important to the mission.

- Identifying the full range of available threat COAs, rather than fully developing one threat COA at the expense of the others; determining the degree of detail required; and then developing all threat COAs to that level of detail.

- Working in a priority order established by the commander's intent and needs, and developing in detail only those COAs the commander has specified.

Stay Objective Oriented

The objective of IPB is to help the commander and staff make decisions and develop the best possible plans in the time available. This requires models of viable threat COAs that will influence mission accomplishment. Supporting the finished plan with intelligence requires a good event template and matrix.

Minimize Essentials

When minimizing essentials, intelligence personnel can get by with a good set of threat models and a good event template and matrix. They can also save time and materials by—

- Combining threat COA model templates and the event template on a single map overlay or using cartoons and sketches as a map substitute.

- Working directly from the map or sketch of major terrain features if the battlespace environment's effects have not been described.

- Identifying the set of threat COAs and briefly comparing them to determine which is most likely and which is most dangerous based on the current situation and the command's mission; and ranking the remaining threat COAs in order of likely adoption.

- Developing the most dangerous and most likely threat COA, and in the absence of guidance from the commander or G-3/S-3, using judgment in deciding which COA to develop first.

- Constructing an event template that focuses on identifying which of the two COAs the threat adopted, developing the remaining COAs, and working each COA in priority order.

- Incorporating each COA's NAIs in the event template as each threat COA is finished.

- Developing the second most likely or second most dangerous threat COA if the most likely COA is also the most dangerous COA, and ensuring at least two COAs are war gamed.

- Waiting until the staff conducts wargaming before structuring the ICRs.

Output

Throughout the IPB process, various products such as the threat models, threat COA graphics, and the event template are produced to support staff planning. The graphics developed, particularly the weather and terrain effects graphics, the situational templates, and the event template, can be disseminated to assist subordinate units in their own planning. Done correctly, these graphics can provide tremendous volumes of understanding and knowledge in concise and easily usable forms. At other times, however, additional written products can and should be prepared. The two products discussed below are the most commonly used, and both are directly derived from the IPB process.

Intelligence Estimate

In order to facilitate staff planning, the G-2/S-2 prepares the intelligence estimate before the remainder of the staff complete their own estimates. The intelligence estimate is the standard means of conveying key basic and current intelligence and relating it to the operational mission. It is a snapshot in time and forms the basis for the facts and assumptions of the decision-making process, driving the other staff estimates and the remaining steps of the Marine Corps Planning Process.

At higher command levels, the intelligence estimate provides major portions of the commander's written estimate. The products of IPB are the basis for the intelligence estimate. If the G-2/S-2 lacks the time required to prepare a written estimate, usually graphics that depict the results of the IPB evaluations and analysis are used as a substitute. A detailed outline for the intelligence estimate format is provided in appendix A.

Target and Objective Studies

The IPB impacts development through the evaluation of terrain and weather and the association of threat forces at specific times and locations within the battlespace. Situation, event, and decision support templates identify NAIs. Once identified, NAIs can then confirm or deny a threat's activities or adoption of a particular COA. Decision points and TAIs are also identified, requiring key intelligence that supports either fire or maneuver. From the IPB and wargaming processes, HVTs and HPTs are derived. Target and objective studies are focused, detailed intelligence products that aid in the application of fires or the maneuver of forces against a specific target set or area. Small units, such as MEU(SOC)s, can also use these studies for mission preparation and execution. See chapter 8 for a detailed discussion of target development.

CHAPTER 6. ANALYSIS OF THE BATTLESPACE

Analysis of the battlespace is a comprehensive study to determine the characteristics and effects of weather, oceanographic, and terrain environmental factors on enemy and friendly operations throughout the commander's AO and AOI. The battlespace analysis serves as a basis for developing specific friendly COAs and for determining enemy capabilities and COAs. This analysis allows the commander and staff to—

- See the battlespace in both spatial (width, depth, height or airspace) and temporal (time) dimensions.

- Appreciate fully the opportunities and limitations afforded by major terrain and oceanographic features, zones of entry, transportation networks, obstacles, and built-up areas within the AO and AOI.

- Fit an operational concept to that battlespace environment.

The limits of the battlespace are determined for all aspects of air, surface, subsurface, land, space, and the electromagnetic spectrum that can impact friendly forces. Defining the limits of the battlespace is a joint effort between the operations and intelligence staffs based on the commander's guidance.

SECTION I. RESPONSIBILITIES

When time permits, the intelligence officer coordinates the development of a battlespace analysis based on anticipated missions. On receipt of the warning or execute order, the intelligence officer reevaluates the analysis in terms of the commander's assigned AO and potential AOI. Changes in the mission and the commander's AO and AOI, or receipt of additional or more accurate information, necessitate revision of the analysis as the operation progresses. Normally, MEF and higher headquarters staff prepare a detailed written analysis when planning anticipated missions. In MSCs, the G-2s may prepare a written analysis tailored to the unit's specific mission and intelligence needs. However, in most operations, the geospatial information and services officer, the intel bn commander or intelligence support coordinator, and the P&A cell officer in charge use the MEF's analysis supplemented by graphic representations of weather and terrain data covering the MAGTF's AO and AOI.

The intelligence officer is responsible for initiating, coordinating, and ensuring that the analysis of the MAGTF's AO and AOI is completed and disseminated. The final analysis represents a coordinated effort of the intelligence officer, the operations officer, and other staff personnel who contribute within their respective warfighting functional areas. At the MEF or MAGTF level, the following organizations and personnel contribute to the final analysis:

- Topographic platoon, P&A company, intel bn—
  - Provides tailored terrain, littoral, and infrastructure studies and factor overlays.
  - Supports integration of weather factors into terrain studies portraying environmental effects.
  - Disseminates products such as graphic tactical decision aids to support IPB and COA development.
- Staff weather officer, intelligence section, MEF CE provides operational weather forecasts and environmental impact graphics as well as other weather and climatic data (e.g., light and tidal information).

- All-source fusion platoon, P&A company, intel bn—

  ■ Develops information on sociological, political, economic, technological, and related conditions covering countries of interest.

  ■ Provides fused, all-source IPB and other intelligence products to support MEF staff planning and decisionmaking.

- Civil affairs officer provides information on civilian personnel, local labor conditions, and capabilities.

- Engineer officer assists in the analysis of routes, potential obstacles and barriers, and other information related to mobility and countermobility.

- Psychological operations officer assists in the assessment of local conditions for psychological operations.

SECTION II. CHARACTERISTICS OF THE BATTLESPACE

The limits of the battlespace are determined for aspects of air, surface, subsurface, land, space, and the electromagnetic spectrum, which can directly or indirectly impact friendly forces. The battlespace generally includes all or most of the AO as well as the AOI. The AOI encompasses that area beyond the AO from which intelligence and information are required to permit planning, decisionmaking, and the successful conduct of operations. Defining the limits of the AO, the AOI, and the battlespace is a joint effort between the operations and intelligence staffs based on the commander's guidance. The AO and AOI are dynamic in nature and include interrelated factors capable of affecting a unit's operation.

The battlespace is measured in four dimensions: depth, width, height, and time. A battlespace analysis of the AO and AOI evaluates and integrates four environmental dimensions: terrain analysis (land), hydrographic analysis (sea), airspace analysis (air), and climatological analysis (weather). The battlespace analysis study allows the operational commander and staff to fully appreciate the opportunities and limitations afforded by major terrain and oceanographic features, zones of entry, transportation networks, obstacles, and built-up areas within the AO and AOI and fit an operational concept to that environment.

SECTION III. TERRAIN ANALYSIS

Terrain analysis is the evaluation of natural and manmade geographic features. This evaluation provides the planning headquarters with information on AAs (location and trafficability), zones of entry (deep, close, and rear areas), and key or decisive terrain.

Responsibilities

Much of the detailed terrain analysis work is done by P&A company GEOINT support teams attached to or in direct support of the MSCs or by GEOINT teams attached to a MEU(SOC) CE.

The P&A company's topographic platoon and imagery intelligence platoon personnel conduct the major portion of the terrain analysis production by—

- Using data bases as a guide for collection, production, and dissemination planning and operations while focusing on the areas of most importance to the commander and the mission.

- Combining data base information with the results of tactical, aerial, and ground reconnaissance.

- Working closely with staff weather officers to ensure terrain analysis products incorporate the

effects of current and projected weather phenomena.

- Using AO and AOI reconnaissance analysis results to focus on areas of most importance to the commander and the mission.

- Analyzing terrain continuously to evaluate the effects of changes in the battlespace environment.

- Forming conclusions regarding the effects of terrain through analysis of the military aspects of the terrain, and evaluation of the terrain's effects on military operations.

Sources of Information

National Imagery and Mapping Agency produces numerous digital data bases that support the development of geospatial factors and geographic classification. Topographic and geodetic maps, aerial charts, and facility maps are basic sources of information used by terrain analysts. Topographic publications can also be obtained from—

- Geographic societies.
- Engineering and scientific firms.
- Government intelligence agencies.
- Libraries.
- Bookstores.
- Universities.

Geospatial Factors

Terrain analysts need data on the trafficability of soils, the presence of bedrock, as well as the type and density of vegetation when developing cover and concealment, cross-country movement, or other geographic data bases.

Surface Configuration

Surface configuration refers to the shape of the earth's land surface. Terrain analysts study surface features such as mountains, slopes, ravines, embankments, ditches, plowed fields, and rice field dikes, because they can profoundly influence military operations. This factor is limited only by physical shape, size, and arrangement; it is not concerned with whether the feature is manmade or of natural origin.

Analysts categorize surface features or landforms by size and shape. The principal groups of landforms are plains, hills, and mountains; within each of these groups are smaller surface features, such as flat lowlands, and valleys. For geospatial analysis and GEOINT production purposes, major landforms are defined on the basis of local relief. Local relief represents the differences in the elevation of each landform group and subgroup (see table 6-1).

Table 6-1. Landform Elevations.

Landform	Elevation
Plains	less than 150 meters
Flat	less than 15 meters
Undulating	15 to 50 meters
Gently rolling	50 to 100 meters
Rolling	100 to 150 meters
Hills	150 to 600 meters
Low	less than 300 meters
High	300 to 600 meters
Mountains	more than 600 meters
Low	600 to 1500 meters
High	more than 1500 meters

Hydrologic Features

Hydrology is the science of surface and subsurface waters. Terrain analysts are concerned with the shape, size, distribution, and temporal

variance of water bodies. Analysts classify hydrologic features as surface water, subsurface water, and wet areas.

Surface Water

This hydrologic feature encompasses inland waters, which are classified as watercourse (e.g., streams, rivers, canals) and standing bodies of water (e.g., lakes, ponds, glaciers). Terrain analysts evaluate watercourses because drainage conditions vary from place to place and from time to time. Military planners are concerned with the flow and channel characteristics of these watercourses and their effect on military operations. Water bodies affect the characteristics of surface drainage by storing precipitation and runoff and by retarding or augmenting flood flows. These water bodies can obstruct cross-country movement or provide AAs when sufficiently frozen.

Subsurface Water

Groundwater or subsurface water is located beneath the surface of the earth. Groundwater is less susceptible to contamination and may be the only source of water in arid regions.

Wet Areas

These tracts of ground are covered with water seasonally or perennially (e.g., swamps and marshes). These areas are treated separately in the collection of data because information requirements differ from other water bodies, especially in evaluation for cross-country movement.

Vegetation Features

Vegetation includes plant life growing on the surface of the earth or other flora in or on the water. Terrain analysts evaluate area vegetation to determine the potential effect on vehicular and foot movement, concealment, cover, observation, airdrops, and construction. The vegetation present indicates the climatic conditions, soil, drainage, and water supply. Vegetation is grouped by type (e.g., trees, scrub and shrubs, grasses, crops).

Trees

This group of vegetation includes perennial woody plants at least 10 feet in height, with single stems and defined crown shapes. An area extensively covered by trees is classified as a forest. Smaller areas covered by trees are classified as woods, groves, or woodlots. On military maps, any perennial vegetation high enough to conceal troops or thick enough to be a serious obstacle to free passage is classified as woods or brushwood.

Scrub and Shrubs

Either deciduous or coniferous, scrubs include a variety of trees that have had their growth stunted because of soil or climatic conditions. Scrub growth includes cactus, stunted shrubs, sagebrush, mesquite, and similar plants found in arid or semiarid areas.

Shrubs, like trees, are either deciduous or coniferous. Shrubs comprise the undergrowth in open forests; in arid and semiarid areas they are the dominant vegetation. Shrubs normally offer no serious obstacle to movement and provide good concealment from ground observation; however, they may restrict fields of fire.

Grasses

This vegetation group includes nonwoody plants. A grassland is an extensive area where the natural vegetation consists primarily of grasses and herbaceous plants, the dominant type in alpine and certain semidesert areas. In low latitudes, grasslands often are termed savannas; in middle latitudes, they are called prairies (tall grass) and steppes (short grass). Grasslands in wet or poorly drained areas are commonly called meadows. For geospatial analysis purposes, grass more than 1 meter (3 feet) high is considered tall, and below that height, grass is considered short. Grass often improves the trafficability of some

soils; very tall grass may also provide conceal-
ment for foot troops.

Field Crops

The predominant class of cultivated vegetation
is field crops. Vine crops and orchards are com-
mon but not widespread, and tree plantations are
found in relatively few areas. Sizes of culti-
vated areas range from paddy fields covering a
quarter of an acre to vast wheat fields extending
for thousands of acres. In a densely populated
agricultural area where all arable land is used
for the crop that brings the highest yield, it may
be possible to predict the nature of the soils
from information about the predominant crops.

For example, rice requires fine-textured soils.
Other crops generally must have firm, well-
drained land. An area of orchards or plantations
usually consists of rows of evenly spaced trees,
which shows evidence of planned planting that
can be distinguished on aerial photographs.
Usually such an area is free from underbrush
and vines. Rice fields are flooded areas sur-
rounded by low dikes or walls. Some crops,
such as grain, improve the trafficability of soils,
while other crops, such as vineyards, present a
tangled maze of poles and wires that are defi-
nite obstacles to vehicles and dismounted
troops. Wheeled vehicles and some tracked ve-
hicles are unable to cross-flooded paddy fields,
although they can negotiate them when the
fields are drained or frozen.

Surface Materials

Terrain analysts evaluate the composition and
physical properties of the earth's surface mate-
rials, which are classified as soil and rock, to
determine their effects on military operations
and construction.

Soil

This unconsolidated material is an accumula-
tion of disintegrated and decayed rock and vege-

tation that overlies bedrock. This accumulation
can be hundreds of feet thick or it may be ab-
sent in given areas. Soils between 15 centime-
ters (6 inches) and 2 meters (6 feet) in depth are
the most important. Next in importance are the
soils from 2 to 6 meters (6 to 20 feet). Soil depth
can be measured directly from borrow pits, road
cuts, building excavations, and stream banks.
For field identification, analysts classify soils as
gravel, sand, silt, clay, and organic matter.

Rock

Rock is the firm or consolidated mineral matter
of the earth's crust. Bedrock is solid undisturbed
rock either exposed at the surface or underlying
the soil. Terrain analysts evaluate the physical
and engineering characteristics of bedrock for use
in construction and in locating ground water.

Military Aspects of Terrain Evaluation

Using portions of the IPB process, the intelli-
gence officer evaluates the battlespace in terms of
Key terrain, **O**bservation and fields of fire, **C**over
and concealment, **O**bstacles, and **A**As and mobil-
ity corridors (KOCOA). The KOCOA analysis is
appropriate at the battalion, squadron, regimen-
tal, Marine aircraft group, and CSS detachment
levels. At division, Marine aircraft wing, force
service support group (FSSG), and higher levels,
KOCOA is absorbed into the terrain analysis pro-
cess. Analysts use KOCOA to determine which
friendly COAs can best exploit the opportunities
the terrain provides and how the terrain affects
the threat's available COAs.

Key Terrain

Key terrain is any location or area that the sei-
zure, retention, or control of affords a marked
advantage to either combatant. Terrain analysts
depict key terrain on overlays with a large "K"
in a circle that encloses and follows the con-
tours of the designated terrain.

Observation and Fields of Fire

Cover and concealment factors can limit or deny observation. Observation analysis is useful in—

● Selecting LZs and DZs.

● Planning helicopter forward arming and refueling point (FARP) locations.

● Identifying areas vulnerable to aerial intelligence collection systems.

● Selecting low-level flight routes and aerial battle positions.

An ideal field of fire for flat trajectory weapons is an open area in which the threat can be seen and on which he has no protection from the fire of those weapons, out to the weapon's maximum effective range.

Geographic factors that offer good observation and fields of fire generally favor defensive COAs. Analysts represent areas of poor observation and fields of fire on an overlay with marked parallel diagonal lines or crosshatching. Observation and fields of fire evaluations identify—

● Potential engagement areas (often referred to as fire sacks or kill zones).

● Defensible terrain and system or equipment positions.

● Locations where maneuvering forces are most vulnerable to observation and fires.

Cover and Concealment

Analysts can combine the cover and concealment evaluation with the overlay developed during the observation and fields of fire evaluation (see fig. 6-1). When preparing the overlay, analysts identify factors that provide cover and concealment. Commanders and staffs use the results of the evaluation to—

● Identify and evaluate AAs.

● Identify defensible terrain and potential battle positions.

● Identify potential assembly and dispersal areas.
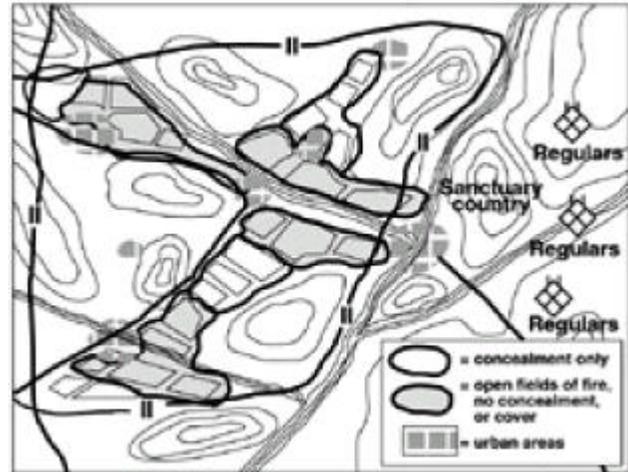
Figure 6-1. Concealment and Cover Overlay.

Cover that provides protection from the effects of direct and indirect fires can be provided by—

● Ditches.

● Caves.

● Riverbanks.

● Folds in the ground.

● Shell craters.

● Buildings.

● Walls.

● Embankments.

Concealment that provides protection from observation can be provided by—

● Woods.

● Underbrush.

● Snowdrifts.

● Tall grass.

● Cultivated vegetation.

Obstacles

Analysts identify natural and manmade obstacles that stop, impede, or divert military movement. Obstacles to air mobility include features that exceed the aircraft's service ceiling, restrict nap-of-the-earth (NOE) flight, or force the aircraft to employ a particular flight profile. An evaluation of obstacles leads to the identification of mobility corridors. This in turn helps identify defensible terrain and AAs.

Evaluation

When evaluating obstacles, analysts—

- Identify pertinent obstacles in the AO by considering—
    - Vegetation.
    - Surface drainage.
    - Surface materials.
    - Surface configuration.
    - Transportation systems (e.g., bridge classifications, road conditions).
    - Weather effects (actual or projected).
- Determine the effect of each obstacle on the mobility of the evaluated force by preparing a separate overlay for each factor, or combine the effects of individual obstacles into an integrated product or COO, which depicts the battlespace effects on mobility.

Classification

Analysts graphically depict and classify the cumulative effects of obstacles as unrestricted, restricted, and severely restricted areas, which are defined below:

- Unrestricted. Indicates terrain free of any restrictions to movement. Nothing needs to be done to enhance mobility. Typically this terrain is flat to moderately sloping terrain with scattered or widely spaced obstacles such as trees or rocks, which allows for armored or mechanized forces and wide maneuvers.

- Restricted. Indicates terrain that hinders movement to some degree. Units may have difficulty maintaining preferred speeds, moving in combat formations, or transitioning from one formation to another. This terrain slows movement by requiring zigzagging or frequent detours. Moderate to steep slopes or moderate to densely spaced obstacles such as trees, rocks, or buildings may restrict armored or mechanized forces. Swamps or rugged terrain may restrict dismounted infantry forces. Poorly developed road systems may restrict logistical and rear area movement. Analysts depict restricted terrain on overlays and sketches by marking the areas with parallel diagonal lines.

- Severely restricted. Indicates terrain that severely hinders or slows movement in combat formations unless some effort is made to enhance mobility. The mobility enhancement efforts could include committing engineer assets to improve mobility, moving in column instead of line formations, or moving at slower than preferred speeds. Steep slopes and large or densely spaced obstacles with little or no supporting roads typically characterize severely restricted terrain for armored and mechanized forces. Analysts depict this type of terrain on overlays and sketches by marking the areas with crosshatched diagonal lines.

Avenues of Approach and Mobility Corridors

To develop the air or ground routes of an attacking force, analysts must identify and categorize mobility corridors. Mobility corridors are areas where a force is channeled around obstacles. The best mobility corridors use unrestricted terrain with enough space for a force to move in its preferred doctrinal formations while avoiding major obstacles. These corridors usually follow the direction of roads and trails.

Considerations

Analysts use the COO to identify mobility corridors wide enough to permit maneuver in tactical formations. If friendly and threat forces require

mobility corridors of different widths as a result of organizational or equipment differences, analysts may conduct two separate evaluations. Identification of mobility corridors requires some knowledge of friendly and threat organizations for combat and preferred tactics. When identifying mobility corridors, analysts must evaluate obstacles and force mobility. The analyst should also consider that—

- Mechanized and armored units generally require large open areas to move.
- Dismounted infantry, most insurgents, and terrorists are less restricted by the presence of obstacles or hindering terrain and prefer areas that provide concealment and cover.
- The mobility corridor used by a jet aircraft with a minimum operating altitude of 1,000 feet is quite different from that considered by a helicopter with a maximum service ceiling of 10,000 feet.

Categories

Once identified, mobility corridors are categorized according to the size or type of force they will accommodate. Mobility corridors are normally identified for forces two echelons below the friendly command. In addition, where terrain is restrictive, the evaluation may need to look several echelons below the friendly command.

Analysts group mobility corridors together to form AAs. Avenues of approach may include areas of severely restricted terrain since they show only the general area through which a force can move. Analysts depict AAs on an overlay using an outline arrow that encompasses the mobility corridors. Threat AAs are generally depicted in red, friendly AAs are depicted in blue.

Evaluation

During offensive operations, analysts evaluate AAs to recommend the best route to the command's objective and to identify avenues available to the enemy for force withdrawal or movement of reserves. During the defense, analysts identify AAs that support the threat's offensive capabilities and avenues that support the movement and commitment of friendly reserves.

An evaluation of AAs identifies those that best support maneuver capabilities. This evaluation should be a combined effort performed by the intelligence section, the imagery and mapping officer or GEOINT support team, and the operations section. These AAs are evaluated for—

- Access to key terrain and adjacent avenues.
- Degree of channelization and ease of movement.
- Use of cover and concealment.
- Use of observation and fields of fire.
- Sustainability.
- Directness to the objective.

SECTION IV. HYDROGRAPHIC ANALYSIS

Sea or hydrographic analysis is the study of areas containing shorelines. Intelligence of coasts and landing beaches is important to military planners because the coast is a country's first line of defense. The hydrographic analysis is subdivided into the offshore, nearshore, and foreshore environments. The land analysis is subdivided into the beach and inland environments. Intelligence personnel conduct hydrographic P&A to evaluate coastal conditions that support amphibious operations. Amphibious operations require detailed oceanography studies that are discussed in Joint Publication (JP) 3-02, *Joint Doctrine for Amphibious Operations,* and FM 34-81, *Weather Support for Army Tactical Operations*.

Sources of Information

The Naval Oceanographic Office (Major Shared Resource Center, John C. Stennis Space Center, National Aeronautics and Space Administration, MS), conducts comprehensive analysis of littoral and hydrographic factors worldwide. Joint Intelligence Center, Pacific; Joint Forces Intelligence Command; and Marine Corps Intelligence Activity (MCIA) produce detailed imagery-based beach studies. Graphic and text-based analysis are available both online via intelligence link (INTELINK) or intelligence link-SECRET (INTELINK-S) and via request for production validated through the operational chain.

Hydrographic Conditions

Analysts evaluating the hydrographic conditions of a coastal region study seas and surf, tides, and currents that can affect amphibious landings.

Seas, Swells, and Surf

Seas are waves that originated in local storms. Swells are waves that have traveled hundreds to several thousands of miles from a distant storm before arriving at the landing site. Breaking waves or surf 4 feet in height normally are considered too high for amphibious assault operations or for logistics over the shore. By identifying the following types of breakers, analysts can determine the trafficability of the nearshore bottom:

- Spilling breakers indicate a gentle sloping bottom. The waves lose energy gradually as they approach shore by breaking only at the crest, and it is common to see a number of such breakers existing simultaneously.

- Plunging breakers indicate an unstable nearshore bottom. These waves break in a roll-over, plunging action that causes abrupt changes in the form of a longshore bar or degree of steepness at the shore.

- Surging breakers indicate a steep nearshore gradient and are the least common of all types of breakers. This type of wave peaks near the shoreline, but instead of breaking or spilling, it actually surges up the face of the beach.

Tides

Tides are the alternate rising and falling of the sea caused by the gravitational attraction of the moon and sun. The tidal range is the complicated product of various forces, including local bottom configuration and the size and configuration of oceanic basins that can alter the height and time of the tides. When identifying beach widths, hazards, and depths, analysts must specify the time of day observations were made to permit tidal computations. Tidal information for most places on the coasts of the world can be obtained from tide tables published by the U.S. Department of Commerce.

Currents

Currents in the nearshore zone which influence amphibious landing operations are generally classified as wave-generated, tidal, or river currents.

Wave-Generated Currents

These currents are caused by the angular breaking of waves on the beach slope and the resultant back rush normal to the beach, which results in a littoral current (longshore current) in the nearshore zone, flowing generally parallel with the shoreline. It is found shoreward of the outermost edge of the breaker zone and varies in velocity or force with the force of the waves, their angle of impingement upon the shore, and the steepness of the foreshore. Littoral currents may be insignificant in terms of amphibious operations, or they may be strong enough to cause personnel to lose their footing, to make maneuvering of craft difficult, and to throw landing or assault craft out of control and expose them to broadside attack by the surf. Littoral currents are particularly significant where depths

shoreward of the breaker zone are such as to make wading hazardous.

Tidal Currents

These currents affect amphibious landings in the proximity of tidal inlets, estuaries, river mouths, and similar restricted channels. With large tidal ranges these currents may make the maneuver of landing craft on beaches adjacent to the tidal inlet extremely hazardous.

River Currents

Currents that extend from rivers into the open sea are frequently of such strength that they affect the maneuver of landing craft near the river's mouth.

Beach Selection Considerations

Beaches are the most prevalent natural features of the coastal region. They are accumulations of loose sand, gravel, or boulders that are shaped by waves and currents acting on the shore. Along many lowland coasts, beaches occur as barrier islands that parallel the coast and are separated by a lagoon or bay. Along other stretches of coast, beaches are backed by eroding cliffs, or the beach may be absent with high rocky cliffs facing the waves.

Hydrographic conditions shoreward of the 30-meter depth curve should be thoroughly investigated and surveyed. Shallower depths of the surf zone from 0 to 30 meters are of primary concern in amphibious operations because crafts ground and troops and vehicles disembark in this area. When preparing hydrographic beach surveys, analysts must—

● Record accurate locations of obstructions.
● Determine clear boat passages to the beach.
● Determine trafficability of bottom materials.
● Select suitable beaching locations for amphibious vehicles.
● Determine maneuver areas for crafts.

From a tactical perspective, the ideal sea approaches to the beach should have—

● No obstructions.
● Deep water close inshore.
● Nearshore gradients deep enough for dry-ramp beaching of landing craft and ships.
● Soil composed of firm sand with gentle gradients.
● Small tides.
● No currents or surf.

The ideal beach terrain should be—

● Flat or gently rising.
● Backed by a coastal range high enough to mask the landing area.
● Relatively clear.
● Firm with adequate drainage.

Analysts evaluate the following beach features to determine those areas that come nearest to the optimum landing requirements.

Size

Analysts measure the beach to determine the force size that can be supported. The beach size also defines requirements for follow-on logistical forces and establishment of logistical base sites or dumps. Analysts determine the usable beach length by measuring, in kilometers, the gross length minus unsuitable landing features, such as rivers and rock outcroppings. When preparing the overlay, analysts describe and plot—

● Unsuitable beach sections.
● Features that might affect movement along the beach.
● Beach widths available at the low-water tide stage (maximum width) and at the high-water tide stage (minimum width), noting each stage of the tide.
● Locations of major changes in width.

Approaches

Analysts identify major obstructions and obstacles in the offshore approaches for an area seaward of the 30-meter depth curve. More detailed analysis and information are provided shoreward from the 30-meter depth curve giving distances and azimuths of obstructions and obstacles from the centerline of the beach. When describing general approach conditions, analysts note the presence of—

- Shoals.
- Bars.
- Kelp beds.
- Island groups.
- Exposed rocks.

Gradient

The foreshore gradient may be so steep as to prohibit the landing of vehicles from beached craft without use of matting, or it may be so flat as to cause personnel and vehicles to move great distances from boats over exposed areas to cover. Analysts express the gradient as one unit of vertical rise in relation to horizontal distance (e.g., 1 foot vertical height over 20 feet of horizontal distance = 1:20). Gradient may also be given in percent of slope or degree of angle. Analysts record gradients when—

- High-water zone of the foreshore is much steeper than the foreshore.
- Seasonal gradient changes information is available.
- Backshores are not level.

Composition

A description of the characteristics of the beach material gives a valuable clue to the slope or gradient of a beach when other information is lacking. Analysts can determine the gradient by the size of the beach material and the character of wave action. The depth of beach materials and the nature of subsurface materials are also indications of beach firmness and trafficability.

Trafficability

The beach's ability to sustain troop and vehicle traffic depends on factors such as moisture content, slope, grain size, and compacting. When evaluating beach trafficability, analysts must consider the following general rules:

- Changes in beach firmness may occur in short periods of time.
- Sandy beaches are more firm when damp.
- Beach backshores are frequently dry and therefore soft.
- Pebbles and cobbles are firm for bearing capacity but are loose for vehicle traction.
- Clay is soft when wet, but combinations of clay and sand may be firm.
- Fine to coarse sand mixtures tend to be firm.
- Soft zones are common near the upper level of wave wash at high tide because air pockets are trapped under the wet sand.
- Sand beaches exposed to wave action are generally firmer than beaches of similar material in sheltered locations.

Vegetation

Beach vegetation rarely affects military operations except for mangrove. These tropical trees and shrubs normally grow in sheltered tidal areas that have a soft, fine bottom material, but they may exist on foreshores that do not experience heavy wave action. Analysts identify the mangrove's interlaced roots, which constitute a barrier to movement.

Natural Obstacles

Analysts evaluate cusps, beach ridges, scarp, and berm to identify areas that could impede movement.

Natural Cusps

These are more or less evenly spaced ridges or horns of beach material and intervening crescent shaped troughs. The horns trend at right angles to the shoreline and taper to their point seaward. Cusps present on beaches should be noted. There are several characteristics of this beach feature that may be significant in amphibious landings. Along gravel beaches, the cusps may develop very large proportions, rising several feet above adjacent troughs and becoming a serious hindrance to traffic. Cusps are soft, whereas the troughs are usually of the same firmness as the normal beach face.

Beach Ridges

These continuous mounds or ridges are created by wave action along the upper limits of the beach. They may occur as single ridges or as a series of parallel ridges extending some distance inland. Commonly 3 to 8 feet in height above mean high tide, beach ridges can attain a height of 30 feet on pebble beaches. Ridges may consist of sand, pebbles, or gravel. Gravel or shingle ridges are high and loose and are very difficult to traverse.

Scarp

This near-vertical face cut into beach materials is caused by erosive wave action and may be a formidable barrier to movement across the beach. Scarps cut into the backshore have permanence, but normal wave action will eliminate foreshore scarps.

Beach Berm

A horizontal formation of material deposited by wave action, beach berm begins at the limit of normal-wave up rush and extends landward. Where more than one berm exists, they are separated by beach scarps in various stages of deterioration. The seaward margin of a berm is know as the berm crest. Berms are usually dry and soft but may be firm for a short time when damp.

Manmade Obstacles

Groins, jetties, bulkheads, and sea walls are manmade structures that could hinder beach operations.

Groins

These structures are used to stabilize a beach. They are long, low, narrow structures extending seaward from the backshore that are built to trap water-suspended sand on shore. Because groins are usually built as a system of structures spaced at regular intervals along the beach, analysts identify them as obstacles to the lateral movement of vehicles.

Jetties

Used to improve and stabilize inlets and river mouths, jetties project seaward from the shoreline through the normal surf zone. They are larger and more massive than groins. They prevent sand deposits in the channel, regulate the inflow and outflow of tides and river discharge, and protect vessels entering the inlet or river. Analysts evaluate jetties to determine if they are high enough to protect vessels against storm wave action and to prevent sand movement in the channel.

Bulkheads and Sea Walls

These structures protect areas of the coast against heavy storm wave action. They limit the shoreward movement of destructive waves, but under severe wave action they may cause the removal of sand from the beach. Analysts evaluate bulkheads and sea walls because they are normally strongly built and difficult to break through, which can prevent troop and vehicular movement from the beach to inland areas.

Exits

Uninterrupted movement inland from a beach is necessary to provide direct, rapid support and supply of combat forces and to avoid the creation of lucrative targets of accumulated material

and personnel on beaches. However, movement off a beach inland onto favorable terrain in many localities is one of the most difficult aspects of a landing because of the prevalence of bluffs, dunes, swamp, or lagoons close behind the beach. Existing exits require little or no preparation.

They may be manmade or natural, such as roads, ramps, stairs, paths, gullies, dry stream beds, and gaps between dunes. Another characteristic of an exit requiring evaluation is the width. An exit should have a minimum width of 8 feet to permit the passage of vehicles.

SECTION V. AIRSPACE ANALYSIS

The addition of the airplane and helicopter to the arsenal of war requires that the battlespace be viewed in terms of width, depth, and a third dimension, height or airspace (measured in cubic kilometers). Because airspace has no reference points to guide the analyst and evidence of air activity is erased seconds after the activity occurs, it is often difficult to establish NAIs, TAIs, and air operations decision points. Airspace analysts are required to tie air events to time and the ground and to integrate the terrain analysis with analysis of—

● Aircraft maximum service ceilings.

● Minimum operating altitudes for fixed- and rotary-wing aircraft.

● Maximum effective ranges of air defense weapons systems.

Geospatial Analysis Support

The intelligence staff receives support from the terrain team during airspace analysis. However, this support must be augmented by personnel from other functional areas with an understanding of the air threat, air defense systems and operations, and close air support techniques.

Geospatial analysis and GEOINT production in support of air defense, counter air, and air-associated operations deal with an environment that extends several thousand meters above ground level and with forces whose mobility is limited only by the ability of their equipment. Terrain analysis is required because aircraft and air defense elements use the terrain to their best advantage.

Standard military topographic maps are not normally considered suitable for other than the most basic airspace analysis. Standard 1:50,000-scale topographic maps are most useful when analyzing the ability of an aircraft to approach, acquire, and engage a target. The analysis of an aircraft's approach (from air base to target vicinity) or of enemy air corridors should be conducted using standard 1:250,000-scale joint operations graphic-air (JOG-A) specifically designed for this purpose.

Airspace Evaluation

The third dimension of the battlespace includes the air AO and the air AOI. The air AO is the area where the commander is assigned responsibility and authority for military operations. The air AOI includes airspace adjacent to the air AO and extends into enemy airspace upward to the maximum service ceiling of enemy aircraft and the maximum effective altitude of enemy air defense weapons systems. It takes into consideration any space-capable system, i.e., satellites. In addition, the air AOI may extend as far as enemy airfields and to the maximum range of enemy surface-to-surface missile systems. During the airspace evaluation of the battlespace, analysts identify potential locations of LZs, DZs, FARPs,

and forward assembly or expeditionary airfields to pinpoint requirements for further analysis.

Military Aspects of Terrain Evaluation

Terrain analysis for air operations focuses on the same military aspects of terrain as ground operations. However, the analysis of these aspects is directed first at their effects on airspace operations and then on their resultant effects on the overall operation.

Key Terrain

Key terrain in airspace analysis is any terrain feature that allows air defense weapons to engage channeled or constrained air or airborne forces. Analysts should identify—

- Areas that limit aircraft lateral movement.

- Areas that restrict air maneuver.

- Elevations higher than maximum aircraft service ceilings.

- Airfields.

- LZs and DZs.

- Fixed or surveyed air defense weapons and radar sites.

- FARPs.

Observation and Fields of Fire

As with ground operations, observation involves the effects of the terrain on reconnaissance and surveillance as well as target acquisition. Fields of fire involve the effects of terrain on weapon's effectiveness. In air defense, both counterair and other air operations are closely related to line of sight (LOS). Ground operations are concerned primarily with horizontal LOS; air and air-associated operations are primarily concerned with air and ground oblique and vertical LOS.

Attack aircraft and air defense assets want as much protection as possible from enemy observation, and both require direct LOS to the target. It is, therefore, necessary to analyze airspace regarding the routes which provide the best protection for aircraft entering the target area and those which provide the best fields of fire for the aircraft once it reaches the target area. Similarly, the analysts must consider where air defense assets can best be hidden from observation and retain good fields of fire against the primary air AAs and mobility corridors.

Cover and Concealment

Friendly force operations require cover from aerial direct fires and concealment from aerial reconnaissance and surveillance. The enemy also uses terrain to provide cover from direct fires and to conceal their operations from friendly detection. Analysts evaluate airspace routes that provide the best protection for aircraft entering the target area and identify locations where air defense assets can best be hidden from observation.

While not considered as either concealment or cover in the strictest sense, NOE flight enhances both fixed- and rotary-wing aircraft survivability. An NOE flight makes the optimum use of available terrain for concealment and cover and hinders quick countering responses by ground forces and air defense assets.

Obstacles

When evaluating terrain, analysts identify the following types of obstacles, which channel aircraft movement and restrict evasive' actions:

- Obstacles to the effective employment of air defense target acquisition or weapon systems (e.g., terrain that masks LOS, built-up areas, tall buildings, vegetation).

- Obstacles that restrict NOE flights, which are below 22.8 meters or 75 feet in height (e.g., tall trees; radio, television, and microwave relay towers; power transmission lines; support towers; smoke and obscurants; tall buildings).

- Obstacles that force aircraft to employ a particular profile or attack route or to gain excessive altitude that is above 22.8 meters in height (e.g., mountains, large hill masses, built-up areas, excessively tall trees).

- Obstacles that restrict lateral movement within the air AA or mobility corridor. These obstacles have the same effect on aircraft as ground obstacles, that is, channeling movement and restricting evasive action. They often become key terrain for the employment of air defense weapons systems.

Avenues of Approach

A good air AA permits maneuver while providing terrain masking from air defense weapons systems. In addition to the criteria evaluated for ground AAs, analysts consider the following variables when analyzing air AAs:

- Type of aircraft.
- Maximum service ceiling of the aircraft.
- Attack profile being employed.
- Weapon system or expected ordnance.
- Type of target to be attacked.

Weather

Aviation operations are especially susceptible to weather effects, because temperature, humidity, and cloud cover can have a significant impact on an aircraft's ability to use a particular AA. Analysts must evaluate the effects of visibility, wind speed and direction, precipitation, cloud cover, temperature, and humidity when conducting analysis for airspace operations.

SECTION VI. WEATHER ANALYSIS

Commanders and their staffs must acquire weather information about the entire battlespace area and know how to exploit the opportunities the weather offers while minimizing its adverse effects on personnel, equipment, and mission accomplishment.

Responsibilities

The following units and personnel are responsible for determining weather effects on the battlespace environment:

- MEF topographic platoon.
- MSC supporting GEOINT support teams.
- MEU(SOC) CE GEOINT teams.
- Staff engineer officer.
- Staff weather officer.
- Weather team.

Weather Effects

Weather, climate, and terrain are so interrelated they must be considered together when planning MAGTF operations. Weather elements are capable of drastically altering terrain features and trafficability. Conversely, terrain features exert some influence on local weather. This relationship of weather and terrain must be carefully correlated in terrain studies to produce accurate geospatial analysis. Terrain features are affected by such elements as visibility, temperature, humidity, precipitation, winds, clouds, and electrical phenomena. The specific factors described vary with the geographic area, time, and season. Terrain features also influence the climate of an area. The effects of temperature, humidity, precipitation, visibility, wind speed and direction, clouds, and atmospheric pressure can affect the battlespace environment, which can enhance or limit military operations.

Temperature and Humidity

Temperature is the value of heat or cold recorded by a thermometer, which is normally placed 6 feet above the ground. Temperatures are recorded in Fahrenheit and Celsius values.

Humidity is the water vapor content in the atmosphere. It is expressed as relative or absolute humidity.

When evaluating temperature and humidity, analysts must consider the following effects on operations:

- Aircraft efficiency is reduced in areas of high temperature and high humidity, because when temperature and humidity are high, the air is denser.
- Extreme temperature and humidity will reduce personnel capabilities and may necessitate a reduction of aircraft payloads.
- Tactics devised for one climatic zone may require considerable revision if used in another zone.
- High temperature and humidity conditions found in the tropics are conducive to growth of dense foliage and jungles, which affects trafficability and cross-country mobility.
- Cold weather periods—
  - Create a need for heated shelters.
  - Make the construction of fortifications difficult.
  - Increase the amount of dependence upon logistical support.
  - Necessitate special clothing, equipment, and combat skills.
- Periods of freezing temperatures—
  - Increase the trafficability of some soils.
  - Create ice sheets on roads, making movement more difficult.
  - Decrease a projectile's ability to penetrate the earth.

- Increase the casualty effect of contact-fuzed shells.
- Melting snows may cause floods and avalanches.
- Temperature inversions (air nearest ground is colder than overlying air) cause the air to remain stable and to hold dust and smoke near the ground, which reduces both visibility and air purity.
- The amount of water vapor in the air affects the trajectory of projectiles.
- Humidity affects the distance sounds travel, thus affecting listening posts and sound-ranging operations.

Precipitation

Precipitation is any moisture falling from a cloud in frozen or liquid form. Common types of precipitation are rain, snow, hail, drizzle, sleet, and freezing rain. The intensity of precipitation is described as light, moderate, or heavy.

The primary significance of precipitation is its effect on the state of the ground and trafficability, on the efficiency of personnel, and on visibility. The effects of restricted visibility caused by precipitation are just as important as those caused by airborne particles such as dust or smoke. When evaluating precipitation, analysts must consider the following effects on operations:

- Rain, snow, and fog mask patrol and guerrilla activities by decreasing the enemy's surveillance and detection capability.
- Precipitation severely reduces trafficability by altering the surface condition of different soils to varying extents.
- Heavy rain may make some types of unsurfaced roads impassable.
- Heavy or prolonged precipitation usually aids the protected defense by limiting the mobility of an offensive force.
- Precipitation can drastically reduce the efficiency and effectiveness of exposed personnel.

- Precipitation may aid offensive operations by degrading the surveillance capabilities of radar, electro-optical, and infrared devices.

- Seasonal precipitation may change soil trafficability and affect cross-country movement.

- Seasonal floods or swelling streams may make fording and bridging operations difficult or impossible.

- Snow and sleet hamper movement on roads, often making them impassable in mountainous areas.

- Snow accumulations in mountains afford lower, drier regions with a water supply throughout the year.

- Precipitation usually has an adverse effect on visibility and observation.

- Rain may wash excessive impurities from the air.

- Rain and snow aid concealment, which may facilitate surprise attacks.

- Precipitation often limits operations of listening posts and many electro-optical systems.

Visibility

Weather personnel determine visibility by measuring the horizontal distance that the unaided eye can discern a large object or terrain feature. Visibility is reported in meters or fractions of a mile for the prevailing value of the visibility in all directions. Diminishing visibility measurements are noted in the remarks section of the weather observation report.

When evaluating the weather effects on military operations, analysts must consider that poor visibility—

- Aids ground offense and withdrawal.

- Restricts visual reconnaissance and surveillance.

- Tends to conceal concentrations and maneuver of friendly forces from the enemy, which enhances the possibility of achieving surprise.

- Hinders the defense because defensive cohesion and control are difficult.

- Decreases the ability to place aimed fire on the advancing force, making target acquisition less accurate.

- Enhances patrol activities and guerrilla operations by masking and screening movement.

Wind Speed and Direction

When weather personnel determine wind speed or velocity and direction, they measure the air movement rate past a given point and the direction from which the wind is blowing. A gust is a rapid fluctuation in wind speed with a variation of 10 knots or more between peak and lull.

When evaluating wind speed effects on the environment, analysts must consider the following effects on operations:

- Wind velocity on the surface and aloft favors the upwind force in any type of operation.

- Chemical and biological weapons will saturate the low-level, downwind atmosphere with contaminating aerosols.

- An upwind force, with the wind at its back, has better forward visibility and can advance easier and faster.

- Strong winds in arid or semiarid areas frequently raise large clouds of dust and sand, which greatly reduce observation.

- Blowing snow may reduce visibility over wide areas, which may ground observation aircraft and sensors.

- Winds tend to deflect projectiles from their normal paths, particularly when they are fired at long ranges. The effect that wind will have on a projectile increases with an increase in the wind velocity and the projectile size. The wind direction and velocity must be known to apply compensating corrections to firing data.

- Strong winds hinder amphibious operations by creating high seas, which can prevent landing craft from landing or retracting and restrict helicopterborne operations during the ship-to-shore movement.

Cloud Conditions

Cloud conditions are described by the amount and height of the cloud cover. Weather personnel measure the height of the cloud base from ground level and report that measurement in feet. A cloud base is the height of the lowest broken or overcast layer, while a cloud ceiling is the height of the highest layer of several scattered cloud layers. The types of clouds help determine the intensity and amounts of precipitation.

The type and amount of cloud cover, as well as the height of cloud bases and tops, influence ground tactics because they affect the entire range of both friendly and enemy aviation. Analysts should consider the following effects on operations when evaluating cloud conditions:

- Extensive cloud cover reduces the effectiveness of air support but provides a tactical advantage as cloud cover increases, as cloud bases lower, and as associated conditions increase (e.g., icing, turbulence, poor visibility).

- Clouds affect ground operations because they may limit illumination and visibility.

- As solar radiation interceptors, clouds tend to reduce extremes of surface temperature.

- Daytime cloudiness reduces the amount of heat received from the sun at the earth's surface,

slowing down the drying of roads and affecting the trafficability of soils.

- Extensive night cloudiness prevents the loss of heat from the earth's surface, resulting in higher nighttime temperatures.

- Cloudiness affects air operations by limiting aerial observation and reconnaissance.

Atmospheric Pressure

The pressure exerted by the atmosphere at a given point is atmospheric pressure, which is measured by a barometer in millibars or in inches of mercury. The air density is measured at high and low altitudes and is reported as high pressure and low pressure. High pressure is critical to air operations because it affects the lift capability of helicopter and fixed-wing aircraft.

Weather Forecast and Weather Effects Products

While planners cannot control the weather, they should be able to exploit the opportunities offered by weather effects while reducing or minimizing its adverse effects on battlespace operations. Analysts provide planners with weather forecasts that cover the geographical layout of the battlespace and meet or exceed the duration of the planning and execution cycles. Using weather critical values tables created during IPB and weather forecast graphics (see fig. 6-2), analysts can quickly identify and determine the impact of weather effects on personnel, equipment, and planned operations. These impacts are displayed in the weather effects matrix (see fig. 6-3).
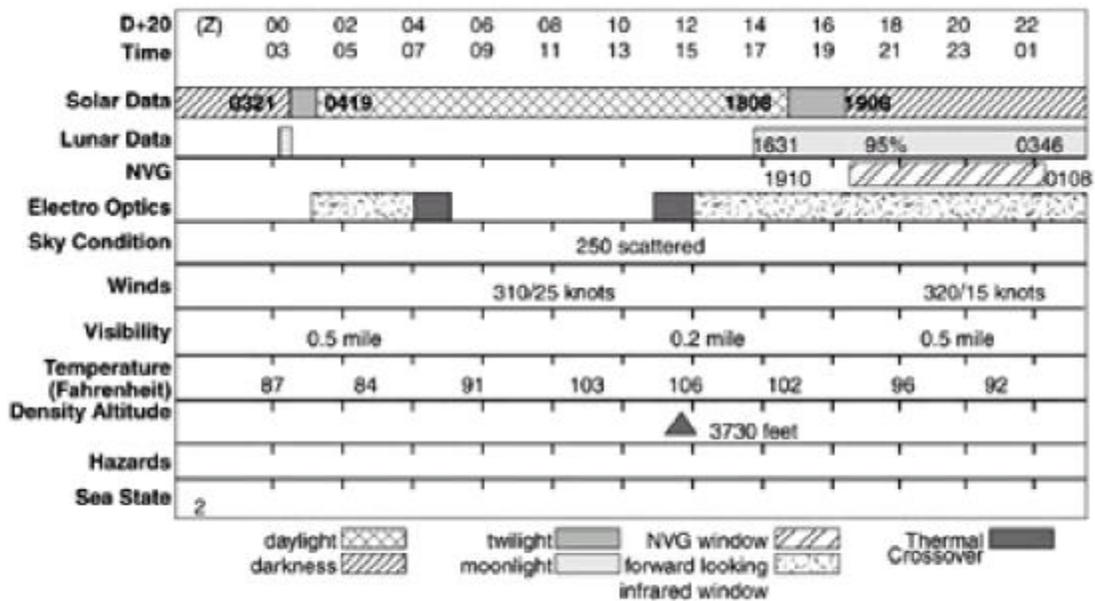
Figure 6-2. Weather Forecast Graphic.
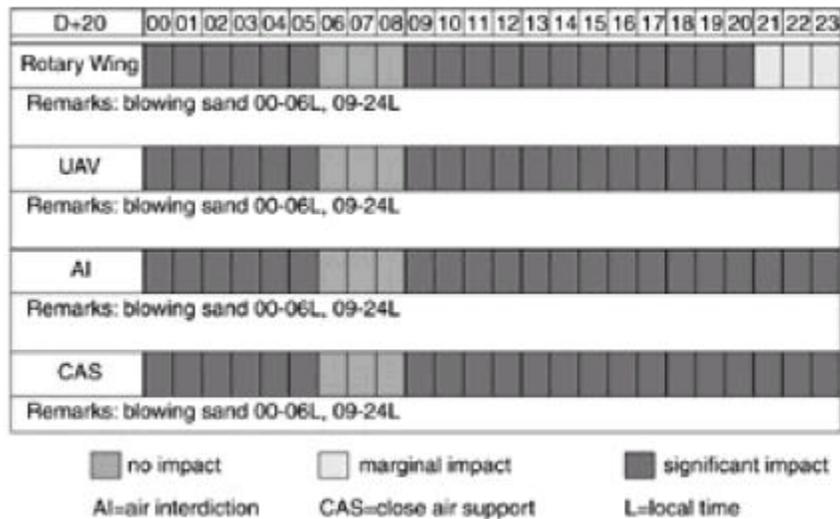
Figure 6-3. Weather Effects Matrix.

SECTION VII. INFRASTRUCTURE ANALYSIS

The infrastructure of a potential AO is a key element of information in an expeditionary environment. Points of entry, transportation systems, economic infrastructure, and social infrastructure, impact how friendly forces enter into, move through, and sustain themselves in the

AO. Infrastructure also impacts a potential threat's ability to conduct operations. The importance of particular facilities depends on the units involved and the type of operations envisioned. The study of a target area's infrastructure must focus on factors that are crucial to mission accomplishment. Most commands, particularly lower level tactical commands, must rely on other organizations and agencies to conduct infrastructure analysis and to provide accessible information.

Sources of Information

Detailed infrastructure analysis can be resource and time intensive, thus identification of analytical requirements prior to conflict or crisis helps ensure the availability of the information when needed. The intelligence staff must be familiar with all sources of infrastructure information that can be rapidly accessed when needed. Infrastructure analyses are performed by—

● Theater joint intelligence centers (JICs).

● U.S. Transportation Command.

● NIMA.

● Defense Intelligence Agency (DIA).

● Service intelligence centers (e.g., National Ground Intelligence Center, MCIA).

● Nonintelligence organizations (e.g., Marine Corps and Army civil affairs units).

Transportation System

In preparing intelligence studies, all transportation facilities must be carefully evaluated to determine their effect on the proposed operations. At higher levels of command, each major facility may be the subject of a detailed study by unit intelligence analysts or by external agencies such as theater JICs, U.S. Transportation Command JIC, or DIA.

Highway or Road Network

For intelligence purposes, a highway means roads, trails, multilane super highways, pack trails, and footpaths. Associated structures and facilities necessary for movement and for protection of routes, such as bridges, ferries, snowsheds, tunnels, and fords are integral parts of the highway system. An adequate highway system is required to conduct a major military operation. Military interest in highways of a given area or country covers physical characteristics of the existing system and various administrative and operational aspects pertaining to construction and maintenance.

Transportation studies should provide information on existing routes, major repair or rehabilitation requirements, and locations of new routes needed to support planned operations. The terrain study should indicate the minimum maintenance and construction requirements that may be anticipated during a planned operation. When evaluating the road network, analysts should consider—

● Routes in the combat zone should meet minimum standards.

● Roads in rear areas near water terminals, airfields, and supply installations must be well surfaced and capable of carrying heavy traffic without excessive maintenance.

● Operations on a wide front require a large number of secondary routes in forward and rear areas. The information presented in a terrain study should indicate the minimum maintenance and construction requirements that may be anticipated during a planned operation.

● Large volumes of heavy traffic severely abuse roads.

● Important bridges, intersections, and narrow passes are primary targets for enemy fires or unconventional operations.

- Maintenance should be conducted only on necessary routes.
- Construction of new routes must be held to a minimum.

Railroad Network

A railway includes fixed property belonging to the line. The fixed property includes land, facilities, bridges, tunnels, snowsheds, galleries, ferries, and other structures necessary for the movement of traffic. Railroad studies cover information pertaining to the development, construction, maintenance, and physical characteristics of the existing system. The network's physical characteristics information is necessary for determining capacities and maintenance requirements. Physical characteristics include the railroad's critical features, component parts (e.g., roadbed, ballast, track, rails/gauge), and horizontal and vertical alignment.

When evaluating railroad networks, analysts must consider the following factors:

- Railways are often the main transportation system in countries without an extensively developed road system.
- Suitability for mass movement and low susceptibility to weather effects make railroads useful for logistic support.
- Secondary and feeder railway lines are important to maneuver warfare with its emphasis on dispersal and the requirement for more and smaller rear installations.
- Railways and their associated facilities are highly vulnerable to enemy attack (e.g., sabotage, guerrilla operations).
- Keeping a railroad operational requires trained security forces and extensive protective measures.

Port and Harbor Facilities

Information and intelligence on ports, naval bases, and shipyard facilities is essential for esti-

mating their capacities, capabilities, vulnerability, and other items of military significance. In wartime, principal and secondary ports and bases are prime targets for destruction. A port normally consists of a harbor plus terminal facilities. When natural, improved, or artificial harbors are developed for transactions between ship and shore, they become part of a port. Analysts classify these harbors as coastal, bay and estuary, and river. When evaluating port and harbor facilities, analysts are interested in harbor works, depths, navigable fairways, and anchorage.

Harbor Works

Structures designed to provide shelter, to control water flow, and to regulate erosion for the improvement of the navigability of a harbor are protective or harbor works. Harbor works do not include port facilities that are designed specifically for the transfer of cargo and the servicing of ships. The principal types of structures are—

- Breakwaters.
- Jetties.
- Groins.
- Sea walls.
- Bulkheads.
- Dikes.
- Locks.
- Moles.

Depths

Analysts compute depths of harbors, entrances, anchorages, wharves, and dry docks in reference planes based on tidal levels. When reporting depth, analysts must clearly indicate the reference plane or chart datum on the hydrographic chart. Datum established for ports is the basis for soundings.

Navigable Fairways

The approach, entrance, and the harbor itself frequently determine the size of ships that can

be accommodated in the port. Analysts must evaluate these fairway dimensions and describe any limitations on a ship's navigation (e.g., draft, length, beam, height above water). In addition, analysts should report ships' experiences entering the fairway.

Anchorage

Analysts show anchorage data on large scale charts and plans. Operational information reported includes—

- Anchorage designations.
- Berth assignments.
- Anchoring practices.
- Ships' experiences.

Airfields

Whether military or civilian, airfields are of vital importance to military combat situations. The size and features of an airfield determine its combat and reconnaissance capabilities.

Types

Installations termed airfields include—

- Air bases.
- Airports.
- Airstrips.
- Landing strips.
- Air depots.
- Heliports.
- Helipads.
- Seaplane stations.

Characteristics

Analysts conduct geographic studies to identify the airfield's—

- Type.
- Physical dimensions.
- Construction materials.

- Field condition.
- Support facilities.

Considerations

When evaluating the airfield, analysts report answers to the following questions:

- Is it serviceable?
- Is it occupied?
- Is it under construction?
- Is it in full or partial operations?

Structures and Crossings

Structures and crossings on highways or railways may reduce or interrupt the flow of traffic on a transportation route. Detailed information on structures and crossings is essential to a battlespace analyst and to an engineer, who may be required to repair or restore a structure. These structures and crossings include bridges, culverts, tunnels, galleries, snowsheds, retaining walls, ferries, fords, cableways, and tramways.

Bridges

Highway and railway bridges are vulnerable points on a LOC. Timely preservation, destruction, or repair of a bridge may be the key to an effective defense or to the successful penetration of an enemy area. A bridge seized intact has great value in offensive operations; even a small bridge facilitates the movement of forces over a river or stream.

Analysts obtain bridge information from reconnaissance or from the NIMA-produced planning terrain tactical data base. Using aerial photographs, analysts can determine bridge length, width, clearance, and height above water. Basic information requirements reported on a bridge include—

- Summary of its structural characteristics.
- Critical dimensions (length, usable width, overhead clearance).

- Capacity estimation.
- General conditions.

Tunnels, Galleries, and Snowsheds

Features on a transportation route where it would be relatively easy to block traffic or that affect the traffic capacity of the road, are considered to be critical features of the road. Such features include tunnels, snowsheds, galleries, mountain passes, terrain gaps, gorges and defiles, deep cuts, steep grades, and sharp curves. Any obstructions to traffic flow, which limit the physical dimensions of vehicles utilizing a specific route, are important aspects of route studies. Reductions in traveled way widths, such as narrow streets in built-up areas, drainage ditches, embankments, and war damage limit vehicular movement. Underpasses and other covered traveled ways may restrict traffic flow not only as to width but also as to height.

A tunnel is an underground section of the route that has been made by cut-and-cover or bored for the passage of a route. It consists of the bore(s), a liner (optional), and portals. Common shapes of tunnel bores are semicircular, elliptical, horseshoe, and square with arched ceiling. Bores may be unlined or lined with brick, masonry or concrete. Some long tunnels are artificially ventilated by blowers at the portals or in ventilating shafts above the bore. Alignment of tunnels may be straight or curved.

Snowsheds and galleries are protective structures built in rugged mountainous terrain. These are not as common as bridges or tunnels. Snowsheds offer protection against snow accumulations as well as drifts and slides on exposed sections of the permanent way. Galleries offer protection against snow and rock avalanches. They may be cut into the side of a cliff and have a natural overhang, or the cover may be a concrete slab, either of which guides the avalanche across the track or road. One side of a gallery is usually open.

Retaining walls are built to support embankments, either on the uphill or downhill side of the roadway. Retaining walls also are necessary where an embankment requires support against the pressure of water.

Ferries

A ferry site is that place where traffic and cargo are conveyed across a river or other water barriers by a vessel called a ferry or ferryboat. Ferryboats or vessels vary widely in physical appearance and capacity depending on the depth, width, and current of the stream and the characteristics of traffic to be moved. Propulsion of ferries may be by oars, cable and pulleys, poles, stream current (trail and flying ferries), or by steam, gasoline, and diesel engines. Analysts report the capacity of a civil ferryboat in tons and total number of passengers. In addition, it is often assigned a military load classification number. Ferry slips or piers are generally provided on the shore to permit easy loading of passengers, cargo, and vehicles. The slips may vary from simple log piers to elaborate terminal buildings. A distinguishing characteristic of a ferry slip is often the floating or adjustable approach ramp, which accommodates variations in the ferry deck level.

The limiting characteristics of ferry sites includes the width of the water barrier from bank to bank, the distance and time traveled by the ferryboat from one side to the other side, and the depths of the water at each ferry slip. Climatic conditions have a marked effect on ferry operations. Fog and ice substantially reduce the total traffic moving capacity and increase the hazard of the water route. Therefore, data on tide fluctuations, freezing periods, floods, excessive dry spells, and their effects on ferry operation are important considerations. Ferry slips are often optimal places for grounding displacement landing craft or as exit points for amphibious vehicles.

Fords

A ford is a location in a water barrier where the physical characteristics of the current, bottom, and approaches permit the passage of personnel or vehicles and other equipment under their own propulsion. Analysts assess a ford site for use as a bridge bypass.

Ford approaches may be paved with concrete or bituminous surface material but are usually un-improved. The composition of the stream bottom determines its trafficability. In some cases, the natural river bottom of a ford may have been improved to increase load-bearing capacity and to reduce the water depth. Improved fords may have gravel or concrete surfacing, layers of sandbags, metal screening or matting, timber or wooden planking. Bottom conditions are determined by checking the stability and composition of the bed. Known and suspected ford sites are key information when assessing the ability of a bridge to be bypassed.

Basic information requirements reported on a ford include—

● Trafficability.
● Approaches.
● Bottom composition.
● Current.

Cableways and Tramways

Cableways and tramways may be encountered in rugged mountainous regions and beach areas or used as connections between two primary supply routes. Cableways and tramways are considered obstacles to low flying aircraft.

Inland Waterways

The term inland waterways is applied to rivers, streams, canals, lakes, and inland seas which are used as avenues of transport. It also includes the intercoastal waterways, usually running parallel to the coastline of a landmass and sheltered to permit the navigation of small vessels. When evaluating inland waterways, analysts must consider the following factors:

● Inland waterways provide an economical form of transportation for bulk supplies, freeing faster modes for shipments of a higher priority.
● Depths of rivers and streams fluctuate with maximum and minimum rainfall.
● Falls and rapids commonly interrupt streams with fairly direct courses.
● Streams of low and uniform gradients are usually slow moving and their channels shift constantly, creating sandbars, which are a menace to navigation.
● Traffic is halted completely during a freezing period unless ice-breaking operations can be conducted.
● Thaw following a freeze may cause floods.
● Periods of drought may result in insufficient water for the movement of vessels.
● Waterway locks, bridges, cuts, dams, and other fixed facilities are vulnerable to enemy action.

Supply Systems

Utilities, services, facilities, and construction resources comprise the essential internal supply systems and installations used to protect and maintain the life of a region or city. Military interest in this field is primarily logistical, although these facilities take on greater importance during urban operations, particularly operations other than war. Analysts must report the adequacy and quality of the petroleum and natural gas facilities, as well as power, water, and telecommunications systems, to ensure their maximum use by military forces.

Power System or Grid

Electricity is essential to the life of modern regions and cities. Destruction of electrical generation and distribution facilities in most

cities would bring industrial production and most utilities and services to a halt.

Petroleum, Oils, and Lubricants Facilities

Information on a nation's petroleum and natural gas resources provides a means for evaluating the capacity of a nation to produce, process, and supply fluid or gaseous hydrocarbons for military purposes. Analysts also evaluate the petroleum supply system's vulnerability to attack.

Water

Water is the most extensively used commodity in both urban and rural habitats. Water supply systems maintain and control the quality and quantity of water in urban areas. Analysts evaluate an area's water supply system to ensure there is an adequate supply of quality water for military purposes.

Telecommunications

Analysts evaluate an area's civil and military telecommunications systems, services, facilities, and equipment for use by military forces. Governmental and commercial organizations that regulate and operate the area's systems are also evaluated. Telecommunications services evaluated include—

- Telephone.
- Telegraph.
- Teleprinter.
- Facsimile.
- Data transmission.
- Radio broadcast.
- Television broadcast.

Urban Areas

The ever-increasing urbanization of the world's population dictates that urban areas will increasingly be the AO for war and operations other than war. Urban area geospatial studies are important in the planning of operations, targeting, and logistical support for operations.

Characteristics

Knowledge of the characteristics of urban areas is essential to the conduct of civil affairs and counterintelligence operations. Urban areas are significant as military objectives, targets, and bases of operations. Often they will be the focal point for internal ethnic, class, religious, or cultural conflict. Urban areas may be one or a combination of—

- Power centers (e.g., political, economic, military).
- Industrial production centers.
- Population centers.
- Transportation centers.
- Service centers (e.g., distribution points for fuels, power, water, raw materials, food, manufactured goods).
- Cultural and scientific centers (e.g., seats of learning, modern technological developments).

Urban Area Classification

An important aspect in the classification of cities is the determination of construction type. Rarely is a city of one type of construction; instead there will be a mixture of everything from shantytowns to skyscrapers. The analyst should attempt to determine what the predominant construction type is as well as what percentages of the city are composed of varying types. Urban areas or cities are classified according to their—

- Population size and density.
- Position in the country's society, economy, and defense establishment (strategic, secondary, or minor).
- Function.
- Construction type (e.g., shantytowns, skyscrapers).

Evaluation Factors

Line of sight considerations in cities are crucial, thus the urban area must be assessed in ground-level, above-ground, and below-ground dimensions. Since urban operations are manpower intensive and generally conducted at low unit levels, the information required is usually very detailed. The MCIA-1586-005-99, *Urban Generic Information Requirements Handbook*, discusses the components of urban area analysis. The primary factors evaluated in urban area GEOINT studies include—

- Physical characteristics.
- Building construction type.
- Accessibility.
- Utilities.
- Civil facilities.
- Industrial facilities.
- Military and other important installations.
- Underground facilities (e.g., subways, sewers, underground rivers, utility tunnels).

Construction Resources

Analysts conduct construction resource studies to evaluate a foreign area's capability to support friendly military operations. To determine construction capabilities, analysts compare area construction types to the work carried out by the U.S. Army Corps of Engineers. These studies include data on—

- Available construction materials.
- Construction industry organization.
- Major construction firms, including data on the firm's—
  - Size.
  - Capital assets.
  - Organization.
  - Amount of equipment.
  - Personnel skills.
  - Experience.
  - Specialization.

SECTION VIII. POLITICAL, ECONOMIC, AND SOCIOLOGICAL ANALYSIS

The current and historical setting of a country is an important and integral part of intelligence analysis. Most of the analysis effort is expended on armed forces and GEOINT, but the factors that can make a difference in many operations, especially operations other than war, involve political, economic, and sociological aspects of the target area.

Political Intelligence

Political intelligence begins with an assessment of the internal political dynamics of a country to include its leadership, internal political stability, economic position, labor supply, physical resources, and relative military power. The first consideration is the distribution of politi-

cal power—is it a democracy, an oligarchy, a dictatorship, or has political power devolved to multiple interest groups such as tribes, clans, or gangs?

Consideration must be given to the sources of political power: authority based on a legitimate constitution and the will of the people, political magnetism, skill and competence of the leaders, or brute force. It is particularly important for western-trained analysts to understand nonwestern political institutions. In other countries, institutions that on the surface are western in nature may in fact operate quite differently. For example, civil and military bureaucracies may not be neutral agents of policy but may operate almost entirely in their own self interest. Armies

may function as political parties or administrators rather than as guardians of the national security. Parliaments may have a developmental or honorary role rather than a legislative role.

The analyst must evaluate the political system as it really operates, not the way it is supposed to operate. Political analysis of a foreign country begins with an assessment of the basic principles of government, governmental operations, foreign policy, political parties, pressure groups, electoral procedures, subversive movements, as well as criminal and terrorist organizations.

Basic Governmental Principles

The starting point of political analysis is the formal political structure and procedure of a foreign nation. Analysts must evaluate—

- Constitutional and legal system.
- Legal position of the legislative, judicial, and executive branches.
- Civil and religious rights of the people.
- People's national devotion to constitutional and legal procedures.

Governmental Operations

Governments are evaluated to determine their efficiency, integrity, and stability. Information about how the government actually operates and changes in the method of operation give the intelligence user clues about the probable future of a political system. When assessing governmental operations, analysts should consider the following:

- Marked inefficiency and corruption, which differs from past patterns, may indicate an impending change in government.
- Continued inefficiency and corruption may indicate popular apathy or a populace unable to effect change.

- Increased restrictions on the electoral process and on the basic social and political rights of the people may mean the government is growing less sure of its position and survivability.

Foreign Policy

Analysis of a target country's foreign policy addresses the country's public and private stance toward the United States, foreign policy goals and objectives, regional role, and alliances. Analysts gather foreign policy data from various sources, to include—

- Diplomatic and military personnel.
- Technical collection systems.
- Official foreign government statements.
- Press releases.
- Public opinion polls.
- International businessmen.
- Academic analyses.

Political Parties

Analysts study special interest parties and groups, (e.g., labor, religious, ethnic, industry) to evaluate their—

- Aims.
- Programs.
- Degree of popular support.
- Financial backing.
- Leadership.
- Electoral procedures.

Pressure Groups

With few exceptions, most states have some type of formal or informal pressure groups. Examples include political parties, associations, religious or ethnic organizations, labor unions, even illegal organizations (e.g., banned political party). The analyst must identify these pressure groups and their aims, methods, relative power,

sources of support, and leadership. Pressure groups may have international connections, and in some cases, may be almost entirely controlled from outside the country.

Electoral Procedures

Elections range from stage shows of limited intelligence significance to a means of peaceful, organized, and scheduled revolution. In addition to the parties, personalities, and policies, the intelligence analyst must consider the circumstances surrounding the actual balloting process and changes from the historical norm.

Subversive Movements

In many countries there are clandestine organizations or guerrilla groups whose intention is to overthrow or destroy the existing government. When analysts report on subversive movements, they should include the organization's—

- Size.
- Character of membership.
- Power base within the society.
- Doctrine or beliefs system.
- Affiliated organizations.
- Key figures.
- Funding.
- Methods of operation.

Criminal and Terrorist Organizations

Criminal organizations in some countries are so powerful that they influence or dominate national governments. Analysts must examine the organization's influence or forceful methods of control. Most terrorist organizations are small, short-lived, and not attached to any government. Analysts should determine if external factors or even the area's government assists the terrorist group.

Economic Intelligence

The study of economics involves the production, distribution, and use of wealth. It analyzes the factors of production and how those factors are used to produce the things that people need and want. Economics focuses on production within nations and on relations between nations, especially on the competition for the world's scarce resources. That competition continues to be a major cause of international conflict.

Economic intelligence focuses on the use of natural and human resources, and especially on the functioning of national economies and economic relations between countries. Economic intelligence is vital to estimating the magnitude of military or other threats to ourselves and our allies. A nation can undertake and carry out only those operations, military or economic, that its economy is able to mount or sustain. In the short run, national strength consists of manpower that can be mobilized and weapons and supplies that have been manufactured or purchased.

The extraordinary expense of modern warfare means that anything beyond the briefest of campaigns will require the total economic resources of a nation. Despite the simplicity of the concept, this task is elusive and difficult.

A large nation's economic resources offer a wide range of possible actions. For example, efforts to increase military preparedness do not necessarily foretell military aggression. While it is possible to develop probability estimates based on key indicators, it would be unwise to think that analysis of economic information alone will yield completely dependable results.

Economic intelligence provides indications and warning of potential crisis or conflict. Economic failure often generates social unrest or disputes with neighboring nations. The resulting instability

may require United States or other national force intervention.

Sources of Economic Intelligence

Because nations and businesses often hide information to limit competition or to prevent the discovery of sensitive military-related technologies, the most reliable information may have to be obtained from more traditional intelligence methods such as informed reporting by attaches and officers on the scene. The most comprehensive and reliable sources of economic intelligence are printed and electronic trade and business publications. These open sources should be supplemented with reports from—

● Attaches and officers on the scene.
● Foreign broadcasts.
● Defectors.
● Commercial contacts.
● Clandestine sources.

Evaluation Factors

Analysts gather the following information for economic studies:

● Size of the area's economy.
● Sources of raw materials (e.g., minerals crucial to production of military weaponry).
● Products of the area manufacturers.
● Methods of production (e.g., advanced technologies).
● Profits from narcotics trafficking.
● Funds transfers by terrorist organizations.

Narcotics and Terrorism

Tracking profits from narcotics trafficking has been one of the most useful forms of intelligence activity against these organizations. Drugs enter the United States via a huge number of routes, but the profits exit by a more limited, and potentially traceable, number of routes.

In some cases, narcotics are a country's prime resource and export. Terrorist organizations can also be tracked and studied using information on funds transfers, although the amounts tend to be smaller than those of narcotics traffickers.

Sociological Analysis

Analysts must study the way people organize their day-to-day living, including the study of groups within society, their composition, organization, purposes and habits, and the role of the individual in society. For intelligence purposes, analysts study seven sociological factors.

Population

Intelligence data derived from censuses and sample surveys describe the size, distribution, and characteristics of the population, including rate of change. Most countries now conduct censuses and publish detailed data. The U.S. Census Bureau and the United Nations are prime sources for detailed data on foreign populations. Analysts use censuses and surveys to evaluate an area's population in terms of—

● Location.
● Growth rates.
● Age and sex structure.
● Labor force.
● Military manpower.
● Migration.

Characteristics of the People

Analysts study social characteristics to determine their contribution to national cohesion or national disintegration. Social characteristics evaluated by analysts include—

● Social stratification.
● Number and distribution of languages.

- Prejudices.
- Formal and informal organizations.
- Traditions.
- Taboos.
- Nonpolitical or religious groupings and tribal or clan organizations.
- Idiosyncrasies.
- Social mobility.

Public Opinion

Key indicators of a society's goals may be found in the attitudes expressed by significant segments of the population on questions of national interest. Opinions may vary from near unanimity to a nearly uniform scattering of opinion over a wide spectrum. Analysts should sample minority opinions, especially of groups capable of pressuring the government.

Education

Analysts concentrate on the general character of education and on the quality of elementary through graduate and professional schools. Data collected for these studies include—

- Education expenditures.
- Relationship between education and other social and political characteristics.
- Education levels among the various components of society.
- Number of students studying abroad.
- Extent to which foreign languages are taught.
- Subjects taught in schools.

Religion

Religious beliefs may be a potentially dangerous friction factor for deployed U.S. personnel; this was experienced in the Middle East with fundamentalist Islamic sects. Understanding those friction factors is essential to mission accomplishment and the protection of friendly forces. Analysts evaluate data collected on an area's religions, which includes—

- Types.
- Size of denominations.
- Growth or decline rates.
- Cooperative or confrontational relationships between religions, the people they represent, and the government.
- Ways the government deals with religious organizations.
- Roles religious groups play in the national decisionmaking process.
- Religious traditions and taboos.

Public Welfare

To evaluate the general health of a population, analysts must identify—

- Health delivery systems.
- Governmental and informal welfare systems.
- Social services provided.
- Living conditions.
- Social insurance.
- Social problems that affect national strength and stability (e.g., divorce rate, slums, drug use, crime) and methods of coping with these problems.

Narcotics and Terrorism Tolerance

A population's level of tolerance for narcotics and terrorist activities depends on the relations between these organizations and the population as a whole. Analysts should determine if the tolerance is a result of the huge sums of money traffickers pump into the economy or a result of trafficker's use of force. Terrorists may be accepted and even supported by the local populace if they are perceived to be working for the good of the local people. The intelligence analyst must evaluate the way these organizations operate.

CHAPTER 7. THREAT ANALYSIS TECHNIQUES

Intelligence analysts make the greatest impact on plans and operations by conducting threat analysis. Using the IPB threat analysis techniques, analysts provide commanders and planners with paragraphs 3 through 5 of the intelligence estimate (see appendix A). To enhance the intelligence estimate, analysts use specialized analytical techniques. This chapter provides a detailed view of the knowledge essential in conducting threat analysis.

SECTION I. INTELLIGENCE PREPARATION OF THE BATTLESPACE TECHNIQUES

When conducting threat IPB, intelligence analysts evaluate the threat OOB, develop a threat model, and determine, evaluate, prioritize, and develop threat COAs.

Threat Order of Battle

An integral part of intelligence analysis, OOB is the identification, strength, command structure, and disposition of units, personnel, and equipment of foreign military forces, including irregular force units, auxiliary, insurgent, and criminal elements. The analyst must consider and integrate OOB intelligence with other METT-T factors to determine threat capabilities, vulnerabilities, intentions, and COAs.

Order of Battle Factors

The OOB analysis involves evaluating a threat force's composition, disposition, strength, tactics, training, logistics, combat effectiveness, electronic technical data, command and control warfare (C2W) data, and other supporting data.

Composition

The identification and organization of specific threat units or commands are keys to OOB intelligence. Through identification, the analyst develops a history of the threat unit's composition, tactics, training, and combat effectiveness. To determine a unit's composition, analysts identify the threat unit by—

- Name.
- Number.
- Type.
- Size or strength.
- Subordination.

Organization is the physical structure of a unit and the relationship of the various elements within that structure. The threat unit's identification within an organization alerts the analyst to the possible presence of other units in the same organization. With knowledge of the threat's organization, analysts can develop accurate intelligence on current strength and combat efficiency.

When analyzing composition, intelligence personnel should consider the unit's self-sufficiency. Units subordinate to a self-sufficient tactical unit, although capable of limited independent action, cannot sustain themselves over relatively long periods of time. These subordinate units are seldom employed independently or separately from the basic self-sufficient tactical unit. For example, a new threat battalion is reported to be operating in the AO. Knowing that the threat normally organizes and operates in brigades composed of three

to five battalions and that those battalions are normally not employed independently, analysts determine it is probable that the remaining elements of the threat brigade are in or near the AO.

Disposition

The threat unit's disposition consists of the unit's location and tactical or administrative deployment method. When evaluating a threat unit's disposition, analysts include the unit's current and projected movements to determine the capabilities of the enemy force and its effect on friendly mission accomplishment. A threat that has moved, is moving, or is planning to move may become capable of a number of actions (e.g., attacking, reinforcing, replacing, withdrawing). Analysts must continually monitor threat movements to integrate the threat unit's disposition with terrain analysis into doctrine and situation templates. When assessing a threat unit's disposition, analysts should consider—

- Predetermined doctrinal deployment, which may lead to an accurate appraisal of probable threat COAs.
- Knowledge of the threat's echelon arrangement may indicate which units will be employed in supporting and reserve roles.
- Patrol activity may indicate planned movement (but in itself is not movement).

Strength

A threat unit's strength is described in terms of personnel, weapons, and equipment. Information concerning enemy strength provides the commander with an indication of threat capabilities and helps determine the threat commander's probable COA. When assessing a threat's strength, analysts should consider—

- Lack of strength lowers the threat force's capabilities estimate, while superiority of strength raises the force's capabilities estimate.

- Marked concentration or buildup of units in an area may indicate a probable COA and threat objectives.
- Changes in strength of potential threat forces during peacetime may indicate the threat's intention to wage conflict.

Tactics

In OOB intelligence, tactics include tactical doctrine as well as tactics employed by specific units. While tactical doctrine refers to the threat's accepted organization and employment principles, tactics refer to the threat's conduct of operations. From tactical doctrine knowledge, the analyst can determine how the threat may employ his infantry, mechanized, armor, and artillery units in the offense and defense under various conditions. Analysts integrate tactics in doctrinal templates and other intelligence products.

Training

Individual and unit training can significantly contribute to the combat effectiveness of any military organization. Analysts assess the thoroughness, degree, and quality of individual training received by the threat's recruit, specialist, noncommissioned officer, and officer to determine the overall efficiency of its armed force. When evaluating the threat's training, analysts should consider—

- Small unit exercises to large scale training maneuvers conducted in seasonal cycles are an essential part of the training necessary for a unit to operate at its full potential.
- Each type or phase of training accomplished by a unit adds to its capabilities and effectiveness.
- Crew training for weapons systems (e.g., tanks, artillery, and aircraft) increases weapons systems effectiveness.

Logistics

The threat's adoption of a COA depends on the ability of the logistical system to support that action. With knowledge of the threat's logistic capabilities, analysts can accurately evaluate the threat's capabilities, strength, and combat effectiveness. The location of a threat unit's logistical support structure elements aids analysts in determining the disposition of maneuver formations. Logistic information critical for effective intelligence analysis includes—

● Classes and types of supply.

● Lines of communication.

● Logistical requirements.

● Procurement methods.

● Distribution priorities and procedures.

● Transportation networks and modes.

● Installations and terminals.

● Evacuation and salvage procedures.

● Maintenance.

Combat Effectiveness

The abilities and fighting qualities of a unit are affected by numerous tangible and intangible factors. Analysts are expected to rate threat combat effectiveness by analyzing the following factors:

● Personnel strength, including estimated losses.

● Conditions and amounts of weapons and equipment.

● Status of training.

● Quality of leadership.

● Individuals' combat experience.

● Length of time a unit has been exposed to combat.

● Efficiency and training of the officer and non-commissioned corps.

● Past performance and traditions.

● Commander's personality traits.

● Morale, esprit, health, discipline, and political reliability (belief in the cause).

● Status of technical and logistical support of the unit.

● Adequacy of military schooling.

● Socioethnic characteristics of the people.

● Geographic area in which committed.

For each unit of interest, analysts must define, evaluate, and assign a color value to each applicable factor. This assessment is highly subjective; the experience and knowledge of the analyst and the scope of available intelligence will determine its validity.

Example: Assessment Values

When evaluating the length of time a unit has been exposed to combat, analysts use the following values:

● *Green*—Sporadic to intermittent limited combat (small arms fire, fire fights).

● *Amber*—Constant limited combat to sporadic intense combat (artillery barrage, heavy weapons).

● *Red*—Sustained intense combat (deliberate attack or defense).

Where a factor has elements, analysts assign a value to each element and then synthesize an overall value for that factor. After assigning a value to each factor, analysts assign an overall combat effectiveness rating to the unit. This process is highly subjective, and allowances can be made for prioritizing or weighting the individual factors. The values assigned to factors and the definitions of the effectiveness rating may be adjusted as the situation dictates.

The values and definitions should be understood by personnel using the information and should be marked on summaries or reports disseminated outside the command.

Example: Combat Effectiveness Values

Threat unit combat effectiveness can be expressed as a color corresponding to the following example definitions. The following associated percentages are not indicators of T/O and table of equipment (T/E) strength, but are shown to indicate a relative range for each definition:

- *Green:* Combat Effective (80-100%)—The unit possesses the required resources to undertake the wartime mission for which it is organized or designed. Few, if any, negative factors exist. The unit does not require any compensation for deficiencies.

- *Amber:* Marginally Combat Effective (60-79%)— The unit possesses the required resources to undertake most of the wartime missions for which it is organized or designed. Some negative factors are present. The unit would require little, if any, compensation for deficiencies.

- *Red:* Limited Combat Effectiveness (40-59%)— The unit possesses the required resources to undertake some, but not all, of the wartime mission for which it is organized or designed. Significant negative factors are present. The unit would require significant compensation for deficiencies.

- *Black:* Combat Ineffective (less than 40%)—The unit is not prepared to undertake its wartime mission. Numerous debilitating negative factors are present.

Electronic OOB and Technical Data

Electronic OOB and other electronic technical data are required to plan and execute SIGINT, electronic warfare, CIS, C2W, and other operations against the threat. This data includes threat communications and noncommunications equipment parameters, modulation, multiplex capability, pulse duration, pulse repetition, frequency, bandwidth, associated weapons systems, and other technical characteristics of electronic emissions. The data also includes critical threat C2 nodes such as command posts, air defense operations centers, and communications relay sites.

With sufficient data, analysts can template threat emitters, which can be used to locate and develop the disposition of forces based on the forces' electronic emission assets. With electronic technical data, a more accurate evaluation of the threat's vulnerabilities to friendly EA and deception can be determined. Additionally, signals intercept and direction finding for SIGINT production are made easier and enhance support to electronic protection.

C2W Data

Analysis of C2W provides the commander with an assessment of the threat's ability to interfere with the friendly force's C2. The C2W data includes threat assets and capabilities to conduct electronic warfare, deception operations, psychological operations, and information warfare. Of increasing importance is the ability of any enemy to penetrate and disrupt friendly C2 and information systems or to deceive or jam friendly position locating devices (e.g., the global positioning system). This requires knowledge of a threat's deception capabilities, EA systems and protection measures, and monitoring capabilities.

Supporting Data

Analysts need supporting information to develop other OOB elements and comprehensive intelligence estimates. Basic intelligence describes the enemy and includes personalities' biographic data, unit history, uniforms and insignia, vehicle numbers, and other information important to mission accomplishment. Biographic data contains information on characteristics and attributes of a threat force's members. Knowledge of personalities is important in identifying units and, in some

cases, predicting a unit's COA. Personality data is valuable because the tactics and combat efficiency of particular units are closely tied to the commander's character, schooling, and personality traits. In MOOTW, supporting data may include tribal, clan, or ethnic group traits and their effects on the combat capabilities or limitations of the threat force.

Analytical Considerations

When assessing OOB factors, analysts should consider that—

- OOB factors must be analyzed as a whole.

- Changes in training status, command personality, strength, or any other OOB factors may affect a unit's tactics.

- The OOB factors form a framework for evaluation of any force.

- Extended family ties of suspected traffickers should be included when evaluating composition during a counternarcotics operation.

- The insurgent political structure and its relationship to the military elements should be included when evaluating an insurgent force.

- Composition analysis of a local terrorist organization would identify the support infrastructure among the local population.

- The OOB evaluation framework should be adapted to the mission and a unit's needs.

- An aviation unit's evaluation of composition would focus more on threat units that contain air defense assets; the equipment evaluation would focus on vulnerabilities of threat targets and technical characteristics of threat air defense systems.

- Properly maintained OOB files are sources of information on the threat's operations, capabilities, and weaknesses. See chapter 2 for a discussion of OOB files.

Threat Model Development

The threat model is a method of synthesizing information into a coherent evaluation of threat intentions and capabilities and predicting COAs. See chapter 5 for a discussion of doctrinal templates, description of preferred tactics and options, and identification of type HVTs.

Doctrinal Templates

When evaluainge doctrinal templates, analysts must—

- Determine how the threat normally organizes for combat and how he deploys and employs his maneuver units and various supporting assets.
- Look for patterns in task organization of forces, timing, distances, relative locations, groupings, or use of terrain and weather.

Doctrinal templates can also portray the threat's normal organization for combat, typical supporting elements available from higher commands, frontages, depths, boundaries, engagement areas, objective depths, and other control measures. The amount of this detail available will vary from situation to situation or may not exist at all. In the latter case, the analyst will need to rely on basic principles of war and tactics to develop an initial doctrinal template. Doctrinal templates are tailored to the needs of the unit creating them.

Description of Tactics and Options

Like the template, the description of the threat's tactics and options is developed from an evaluation of his doctrine and previous and current operations. Analysts include a description of the branches and sequels available to or preferred by the threat should the depicted operation succeed or fail. For example, the threat might prefer to follow successful attacks with pursuit. Should an attack begin to fail, his preferred branches might

include committing reserves, reinforcement, or shifting the main effort. Should the attack fail, his preferred sequel might be a hasty defense.

Analysts include decision criteria revealed in the data base that cause the threat to prefer one option over another. This intelligence will aid in wargaming threat and friendly COAs, targeting, and deception planning. When developing a threat model, analysts use the following techniques to describe tactics and options:

- Start with the scheme of maneuver and examine how each battlespace function provides support.
- Use time-event charts to describe how the threat normally conducts operations. These

are particularly useful for describing large-scale air operations, which are difficult to depict graphically. With a time-event chart the time relationship between various echelons and their normal composition can be described easily.

- Make marginal notations on the graphic template and combine words with pictures to enhance understanding. Marginal notes are particularly effective when tagged to key events or positions on the template.
- Use a battlespace or warfighting function synchronization matrix (see fig. 7-1) to dissect threat operations and relate particular actions to time for threats with well-developed tactics and complex combined-arms organizations.

Time	H-10	H-1	H	H+4	H+7	H+8.5	H+10
Friendly Action	Begin move to attack position	Prepare fires	Cross line of departure	Engage 1st echelon	Defeat 1st echelon		
Enemy Decision Point					☆1		
Enemy Maneuver				Local counterattack	Close air support and attack helicopters to counterattack objective	Reserves begin move	Reserves pass NAI 9
Enemy Fire Support		Counterbattery	Engage HPTs	Defensive fires	Countermobility fires	Support reserve in engagement areas 7, 8, and 9	
Enemy Intelligence	Locate main effort	Locate artillery, identify main effort	Locate reserve, HPTs				
Enemy C2					Commit reserve to counterattack option 1 or block options 2 and 3		
Enemy Engineers	Continue counter-mobility in main battle area						

Figure 7-1. Threat Synchronization Matrix.

Identification of Type High-Value Targets

Analysts use the following techniques to identify type (e.g., air defense, engineer) HVTs for the threat model:

- Use tactical judgment when evaluating the data base, the doctrinal template, and its supporting narrative to identify HVTs.

- Mentally war game the threat operation under consideration to determine how the threat will use battlespace assets and to identify those assets critical to the operation's success.

- Identify assets necessary to satisfy decision criteria or initial adoption of the branches and sequels listed in the description and option statements.

- Determine the threat's reaction to the loss of each identified HVT. Consider his ability to substitute other assets and to adopt branches to the operation.

- Rank the set of HVTs in order of their relative value to the threat's operation, record sets as part of the threat model, and note value changes by phase of operation.

- Use a target value matrix to annotate identified HVTs in the margins of the doctrinal template. Figure 7-2 is a threat model depicting a doctrinal template, tactics and options description, and target value matrix.
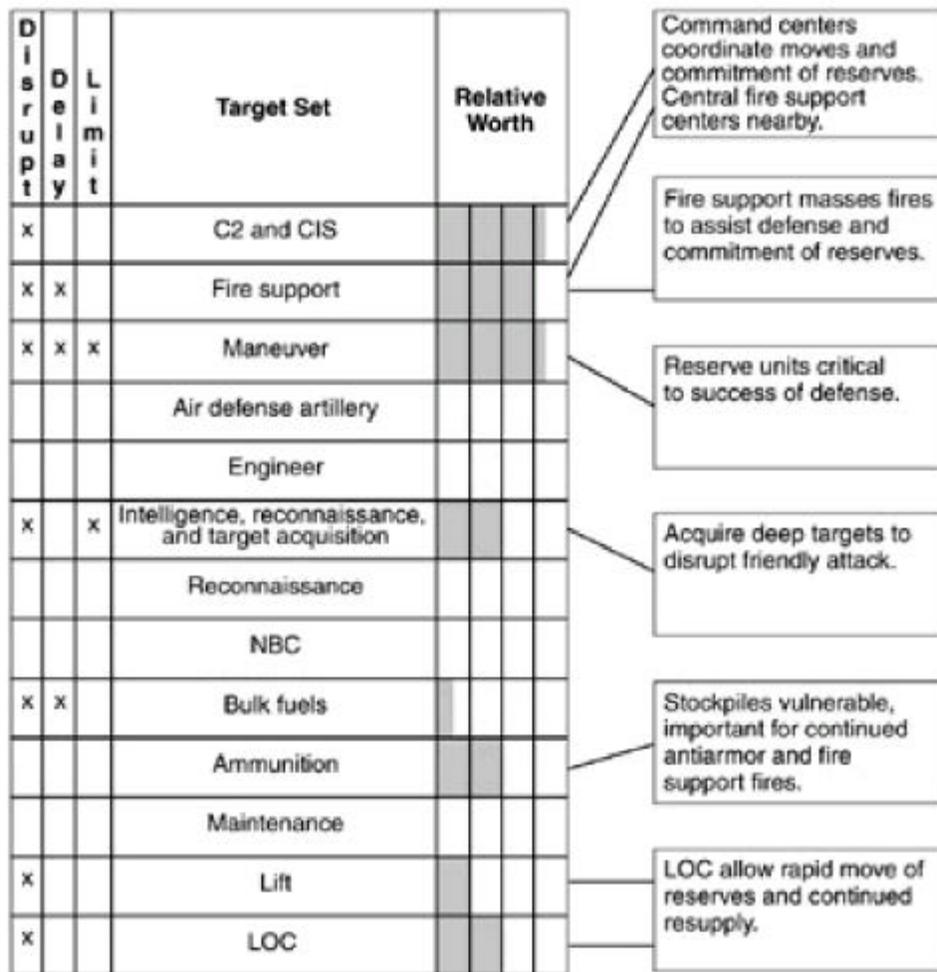
Figure 7-2. Threat Model with Target Value Matrix.

Threat Courses of Action Determination

To determine threat COAs, analysts start with general COAs open to the threat, such as deliberate attack, defend, and delay. They further define each general COA as a set of specific COAs by integrating the threat models developed in IPB process step 3 with the description of the battlespace effects from IPB process step 2.

Criteria for Testing Threat Courses of Action

Analysts must test each enemy COA using the criteria of suitability, feasibility, acceptability, uniqueness, and consistency with doctrine.

Suitability

When determining the suitability of a threat COA, analysts must evaluate the COA's potential for accomplishing the threat's objective.

Feasibility

Analysts evaluating the feasibility of a threat COA must answer the following questions:

● Are the time and space required to execute the COA available?
● Does the threat have the physical means required to make the COA a success?
● What radical measures can he take to create the conditions for success?

Acceptability

In determining the acceptability of a threat COA, analysts must consider the amount of risk involved by answering the following questions:

● Will threat forces accept the amount of risk entailed in adopting the COA?
● Can they afford the expenditure of resources for an uncertain chance at success? (This is a subjective judgment based on knowledge of the threat and his doctrine. In some instances, the threat might undertake otherwise unfavor-

able COAs, particularly if they are the only means to accomplishing his objective.)

Uniqueness

To determine the uniqueness of each threat COA, analysts must use their experience and training to answer the following questions:

● How will the COA affect the friendly mission?
● Will the threat use reserves or a second echelon?
● Where is the threat's main effort?
● What is the threat's scheme of maneuver?
● How is the threat task-organized?

Consistency with Doctrine and Recent Activities

When evaluating a threat COA's consistency with doctrine and recent activities, analysts must answer the following questions to be consistent with the threat's doctrine and recently observed activities, practices, and patterns.

● Is the COA consistent with the threat's written doctrine and past application of doctrine observation, as revealed in the intelligence data base?
● Will the threat achieve surprise by deviating from its known doctrine?

Considerations

To determine the COAs the threat believes are available, analysts should—

● Consider the effect of friendly dispositions or the threat's perception of friendly dispositions on the threat's COA.
● Conduct reverse IPB or replicate the process the threat is employing to discern friendly COAs.
● Consider the intelligence and reconnaissance assets available to the threat, their ability to collect information and produce intelligence, and the picture that intelligence will give threat commanders.

● Focus on threat COAs that will affect accomplishment of the friendly mission and include those indications that the threat might adopt a COA that favors accomplishment of the friendly mission. This prepares the commander to take advantage of opportunities that might arise.

Example: Threat COA That Favors Friendly Mission Accomplishmentp

If the friendly mission is to attack to destroy the threat, interfering threat COAs could be defend (including counterattacks), reinforce, and withdraw. If the friendly mission is to seize a terrain objective, interfering threat COAs could be defend (including counterattacks) and reinforce. Threat withdrawal would favor the accomplishment of this friendly mission and should also be included in the set of COAs if there are indications the threat might actually withdraw.

● Identify less likely but viable threat COAs by considering the threat's—
  ■ Superior understanding of the political, cultural, or information characteristics of the battlespace.
  ■ Ignorance of the military arts and sciences.
  ■ Immature decisionmaking.
  ■ Uncertainty as to friendly dispositions or intent.
  ■ Unexpected objectives or desired end states.
  ■ Cultural definitions of defeat and victory.
  ■ Willingness to sustain defeat at the tactical or operational level to achieve victory at the strategic or political level.
  ■ Desperation.
  ■ Bureaucratic inefficiency.
  ■ Audacity.

Course of Action Evaluation and Prioritization

The resulting set of COAs developed should depict the full set of options available to the threat. At this point the analyst should remember that the threat COAs identified are assumptions about the threat, not facts. For this reason, the analyst cannot predict with complete accuracy which of the COAs the threat will employ. However, the commander and staff still need to develop a plan that is optimized to one of the COAs, while allowing for contingency options if the threat chooses another COA. Therefore, the analyst must evaluate, analyze, and form an estimate for each COA and prioritize it according to how likely it is that the threat will adopt that option. The analysts must establish an initial priority list to allow the staff to plan for friendly COAs. Once the commander selects a friendly COA, the analyst may need to reorder the list of threat COAs and consider changes in the threat's perception of friendly forces.

Course of Action Development

Once the complete set of threat COAs has been identified, analysts develop each COA into as much detail as the situation requires and time allows. Analysts base the order in which each COA is developed on its probability of adoption and the commander's guidance. Each COA must answer the following five questions:

● **What**—The type of operation (e.g., attack, defend, reinforce, conduct retrograde).
● **When**—The time the action will begin is usually stated in terms of the earliest time that

the threat can adopt the COA under consideration.

- **Where**—The sectors, zones, axis of attack, AAs, and objectives that make up the COA.

- **How**—The method by which the threat will employ his assets (e.g., dispositions, location of main effort, the scheme of maneuver, and support required).

- **Why**—The objective or end state the threat intends to accomplish.

Course of Action Parts

Analysts consider threat forces available to at least one level of command above their own command when developing each COA. This helps to ensure accountability for possible reinforcing forces and the higher command's own objectives and intent. Each developed threat COA should contain a—

- Situation template.
- Description of the COA and options.
- Listing of HVTs.

Considerations

When considering an attacking threat, less detail is required. For example, depending on the situation, a friendly battalion might need only to work to a level of detail of threat companies. Considering the possible variations in the threat's COA based on the details of employment of individual platoons adds a tremendous amount of effort to the process, perhaps for little gain.

When considering a defending threat, a greater level of detail generally is required. For example, an attacking friendly battalion might be concerned with individual crew-served weapons positions given their relative contribution to the threat's defense.

Operations other than war will generally require a greater level of detail. The situation template may

address such things as locations and movements of potential evacuees, displaced persons, or protesters as well as threats such as individual air defense systems and irregular forces. Analysts must focus on what is essential to accomplishing the friendly mission.

Course of Action Key Elements

The key elements of each COA are indicators, NAIs, and HVTs. These key elements will drive the collection and production efforts to determine which COA the threat will actually adopt. The art of identifying initial ICRs and IPRs revolves around—

- Predicting specific areas and activities which, when observed, will reveal the COA the threat has chosen.

- Determining the type intelligence products, formats, and who needs them.

As a threat force is visualized executing a COA during situation templating, analysts identify places where activity must occur if that COA is adopted. The NAIs facilitate intelligence collection, reconnaissance and surveillance, and analysis because—

- Attention is focused on areas where the enemy force must appear if the enemy has selected a particular mobility corridor or AA.

- Military significant events can be framed by time and location within the NAI.

- Events in one NAI can be compared to events occurring in the NAI of other mobility corridors as the basis for determining enemy intentions.

- Events within NAIs can be analyzed for indicators and HVTs against which intelligence and target acquisition resources can be directed.

SECTION II. SPECIALIZED ANALYTICAL TECHNIQUES

While IPB provides the overall framework and techniques for analyzing the threat, situations may dictate the use of more specialized techniques to enhance the overall product. Discussed below are a few of the more common techniques used by intelligence analysts.

Subsystem Threat Analysis

Subsystem analysis plays a major role in determining the overall posture of a threat force. Most of the products prepared during the IPB process will only partially satisfy the requirements of other staff sections and subordinate units. The targeting process may require focus on a particular aspect of the threat force. The intelligence analyst must be aware of the important threat analysis factors that specialized staff sections and units use in their IPB responsibilities. Intelligence analysts serve as the focal point for supplying information and data on a specific subsystem to other staff sections and units. Intelligence personnel assigned to specialized units discussed below will tailor their IPB efforts to the needs of their unit.

Air Defense

Evaluation

When air defense units and staffs evaluate the threat, they focus on threats posed by UAVs, cruise and ballistic missiles, fixed- and rotary-wing aircraft, and airborne and air assault forces. In addition to the broad range of OOB factors and threat capabilities, air defense staffs and units must evaluate—

- Flight operations tactics.

- Ordnance types and availability.

- Ordnance delivery techniques (e.g., standoff ranges, release speeds and altitudes, guidance systems).

- Technical capabilities of aircraft (e.g., all-weather or night, maximum and minimum speeds, ceilings, range, payloads, aerial refueling).

- Target selection priorities for air strikes or attack by air assaults.

- Air strike allocation procedures.

- C2 and supporting CIS procedures and techniques.

- Navigation capabilities.

- Threats to friendly air defense artillery (ADA) assets, including threat ground forces and electronic warfare assets.

COA Determination

The threat's air activities will be a part of his overall operation. Intelligence personnel begin determining the threat's air COAs by acquiring the supported command's basic IPB products, to include situation templates. Analysts evaluate the general COAs that situation templates portray and determine how the threat might support COAs with air power. When determining air COAs, analysts must consider the maneuver forces the COAs support. The employment flexibility of modern aircraft makes the determination of specific threat COAs extremely difficult. When determining the threat's air COAs, analysts should answer the following questions:

- Where will the threat locate FARPs?

- When will the threat's air strikes or air assault operations occur?

- What are the threat's targets and objectives?

- What are the threat's likely air corridors and air AAs?

- What are the threat's strike package composition, flight profiles, and spacing in time and space, including altitudes?

- Where do friendly air defense assets fit into the threat COA?
- Will the threat ground COAs require movement of friendly ADA assets?

Artillery

Evaluation

When evaluating the threat, the artillery unit personnel or staff should—

- Refine standard threat models to focus on HVTs.
- Evaluate the threat's ability to fight the counterfire battle by—
  - Identifying the threat's target acquisition assets and describing their normal deployment patterns and tactics.
  - Describing the accuracy and timeliness of each threat target acquisition system.
  - Identifying CIS that moves target acquisition information to decision-makers or weapons systems, and describing the system in terms of efficiency and timeliness.
- Describe the threat's ability to locate and destroy friendly target acquisition assets.
- Use techniques associated with the rear battle to evaluate rear area threat to artillery units.

COA Determination

When determining threat COAs, analysts—

- Refine the threat COA models to reflect—
  - HVTs.
  - Dispositions and activity of threat fire support.
  - Dispositions of threat target acquisition assets.
  - Rear area threats to friendly units.
- Focus on COAs that primarily deal with counterfire against friendly assets, other aspects of force protection, and threat activities that will require friendly units to displace.

Aviation

Evaluation

When evaluating the threat, aviation unit personnel identify—

- Units supported by ADA assets.
- Types of ADA systems and their capabilities, such as—
  - Ranges.
  - Altitudes.
  - Engagement times.
  - Fusing systems.
  - Radars.
  - Countermeasures.
  - Range capabilities.
  - Altitude restrictions.
- Other threats such as lasers or artillery fire zones.
- Artificial illumination effects on target acquisition and night vision devices.
- Target characteristics, such as—
  - Normal deployment patterns.
  - Capability to detect attacking aircraft.
  - Typical reactions.
  - HVTs within each formation.

COA Determination

When refining the higher command's threat COA model, analysts—

- Include air defense system range fans.
- Determine where radars and weapons systems are masked by terrain.
- Identify areas with the least amount of air defense coverage.
- Identify likely threat air approaches to friendly engagement areas and battle positions.
- Develop situation templates for threat actions within the engagement area and include reactions to aviation attack.

- Identify threat units along flight paths, consider threat units' reactions, and develop appropriate situation templates.

- Consider threat reactions to downed pilots.

Counterintelligence

Evaluation

When assessing the threat, counterintelligence personnel—

- Describe the threat decisionmaking process and include descriptions of the threat's—

  - IPB process.

  - Command estimate and wargaming methods.

  - Techniques for selecting intelligence requirements.

  - Collection planning and collection management.

  - Asset reporting system.

  - Intelligence processing architecture.

  - Dissemination procedures.

- Estimate the standard lengths of the threat decision cycle for both anticipated and unanticipated decisions by answering the following questions:

  - How long does it take the threat staff to plan and execute a new mission?

  - How long does it take the threat staff to plan and execute changes to the current mission?

  - What is the length of time between acquisition of key indicators by collection assets and execution of that decision?

- Identify the collection systems available to each threat unit, develop doctrinal templates and descriptions for the standard employment of these systems, and rank each collection system in relative order of importance to standard threat operations.

COA Determination

When formulating threat COAs, the analyst should—

- Determine threat intelligence requirements by using the basic maneuver COA model and by answering the following questions:

  - What does the threat need to know to make operations successful?

  - Where are the decision points?

  - When does the threat need to know?

- Estimate the threat's intelligence requirements and attempt to recreate his version of the event template, matrix (NAIs and indicators), and collection plan.

- Develop products that show the employment of each collection system and the ensuing coverage by—

  - Depicting range fans for each system.

  - Describing the type of activity that can be collected within each range fan.

  - Highlighting the strengths and weaknesses of the threat collection plan.

- Develop a friendly event template to support counterintelligence and counterreconnaissance.

- Identify locations (NAIs) and activities (indicators) that confirm or deny key elements of the threat collection assumptions.

Command and Control Warfare

Threat analysis in support of C2W can be divided into areas of threat capabilities to conduct C2W and threat vulnerabilities to C2W.

Evaluation of Capabilities

When evaluating threat C2W capabilities, the analyst should consider the threat's—

- Ability to locate and intercept our C2 centers and agencies and supporting CIS.

- Targeting speed and accuracies of threat intelligence collection systems and capabilities of its production elements.

- EA equipment and techniques effectiveness, to include capabilities against space-based systems and computer networks.

- Ability to link collection systems to indirect fire systems.

- Range capabilities of supporting indirect fire systems.

- Ability to conduct deep strikes or special operation forces operations.

- Deception doctrine, tactics, techniques, procedures, and effectiveness.

- Psychological operation capabilities and effectiveness.

- Deployment patterns and tactics of SIGINT collection systems and EA assets, as depicted on the threat model.

- Deployment patterns, tactics, and range capabilities of long-range indirect fire systems, as depicted on the threat model.

- Techniques of intrusion or electronic deception, as depicted on the threat model.

Evaluation of Vulnerabilities

When evaluating threat vulnerabilities to C2W, analysts consider the threat's—

- C2 structure and CIS, with emphasis on locating key C2 nodes.

- Decisionmaking process and speed.

- Command personalities.

- Intelligence, reconnaissance, and target acquisition assets and their vulnerability to jamming or deception.

- Communications security procedures and their ability to work through or around EA.

- Counterintelligence effectiveness.

- Operations security procedures and effectiveness.

- Effectiveness of electronic protective measures and computer network protection.

- Susceptibility to psychological operations and ability to conduct counterpsychological operations.

COA Determination

When developing threat COAs, analysts consider threat C2W capabilities and how those capabilities will be used to support specific operations. The threat command, control, and communications posture and associated vulnerabilities are considered during the identification of COGs and HVTs and contribute to development of HPTs and targeting strategies.

Engineer

Evaluation

Analysts conducting threat analysis in support of engineer planning should evaluate the threat's—

- Engineer units' organization, standard operations, equipment, and employed tactics for conducting mobility, countermobility, survivability, obstacle placement, and breaching operations.

- Engineering capabilities required to lay each type of obstacle system, to breach obstacles, to entrench a type unit, and to bridge different size rivers and streams.

- Logistical system ability to sustain engineer operations.

- Weapons capabilities to penetrate friendly survivability measures and systems.

- Survivability techniques (e.g., use of chain-link fence to defeat antitank rounds and missiles).

- Engineer capabilities of threat infantry, armor, and other nonengineer units.

COA Determination

When determining threat COAs, analysts should include engineering factors in threat models and templates. To develop situation templates for engineers, analysts use the maneuver situation

template of the supported unit and develop multiple threat engineer COAs that include—

- An engineer status estimate, which includes the percentage of combat vehicles with entrenched primary, alternate, supplementary, and deception positions and the extent of likely obstacle system measures.

- Likely locations and obstacle systems required to support, disrupt, turn, fix, or block defensive measures.

- A mobility support estimate, which includes the maneuver and supporting engineer detachments' breaching and fording capabilities.

Combat Service Support

Evaluation

When conducting threat analysis in support of CSS staffs and units, analysts should include—

- Regular threat formations, particularly reserves or second echelon units, that might penetrate main defenses or conduct counterattacks through CSS areas.

- Details on air assault, airborne, unconventional warfare, and light infantry forces and their means of infiltration (e.g., air, ground, and sea).

- Insurgent and partisan forces.
- Terrorist organizations.
- Criminal organizations.

COA Determination

When preparing threat models in support of CSS units, analysts include—

- Air assault, airborne, and light infantry techniques for deep attack.

- Unconventional warfare techniques for deep operations.

- Standard procedures for insurgent raids and ambushes.

- Typical procedures for terrorist attacks.
- Targets and methods of operations for criminal organizations.

COA Development

When evaluating threat COAs, the analyst should consider each maneuver COA available to the threat and develop multiple CSS COAs that include—

- Likely areas of penetration for ground forces.

- Likely objectives in the rear area that will facilitate the threat's main attack or defense.

- The HVTs and HPTs (e.g., key terrain, specified CSS activities) that the threat will identify to support their concepts of operations.

- Situation templates for air assault and airborne operations (e.g., air avenues to LZs and DZs, infiltration lanes, exfiltration lanes).

- Insurgent or partisan activities (e.g., assembly and hide areas, infiltration routes, objective actions, exfiltration).

- Terrorist and sabotage activities.

Pattern Analysis

Pattern analysis is the process of careful observation and evaluation of threat activities to deduce the doctrinal principals and techniques, tactics, and procedures that threat forces or groups prefer to employ. When faced by an opponent whose doctrine is unknown or undeveloped, the intelligence analyst must use pattern analysis to create or update threat models and doctrinal templates. This form of analysis is used in operations other than war, such as counterinsurgency, peacekeeping, or even humanitarian assistance operations. The coordinates register and pattern analysis plot sheet are used to develop threat models when it is necessary to determine threat operational patterns.

Coordinates Register

Sometimes referred to as an incident map, a coordinates register illustrates cumulative events that have occurred within the AO (see fig. 7-3). Coordinates registers focus on where an event occurred, but it can contain additional information as the situation dictates. The date and time of the incident are recorded next to the location. As reports of individual events or sightings are recorded, the analyst attempts to identify links between the location and time of those events. What may appear to be random events will often develop into coordinated actions. When time lined and illustrated, these events form patterns that provide the basis for developing threat models and doctrinal templates. Although the time of the event is normally recorded on the

coordinates register, it should always be used with the pattern analysis plot sheet and the doctrinal template, if developed.

Pattern Analysis Plot Sheet

The pattern analysis plot sheet focuses on the time and date each incident occurs in the AO. In figure 7-4, the rings depict the days of the month and the radial segments depict the hours of the day. Events are recorded using the same alphanumeric designator as was used on the coordinates register to allow easy cross-referencing. Along the right side of the plot sheet, the events are recorded by the day and date they occurred. By organizing the events in this manner, it is possible to identify the times of the day and days of the
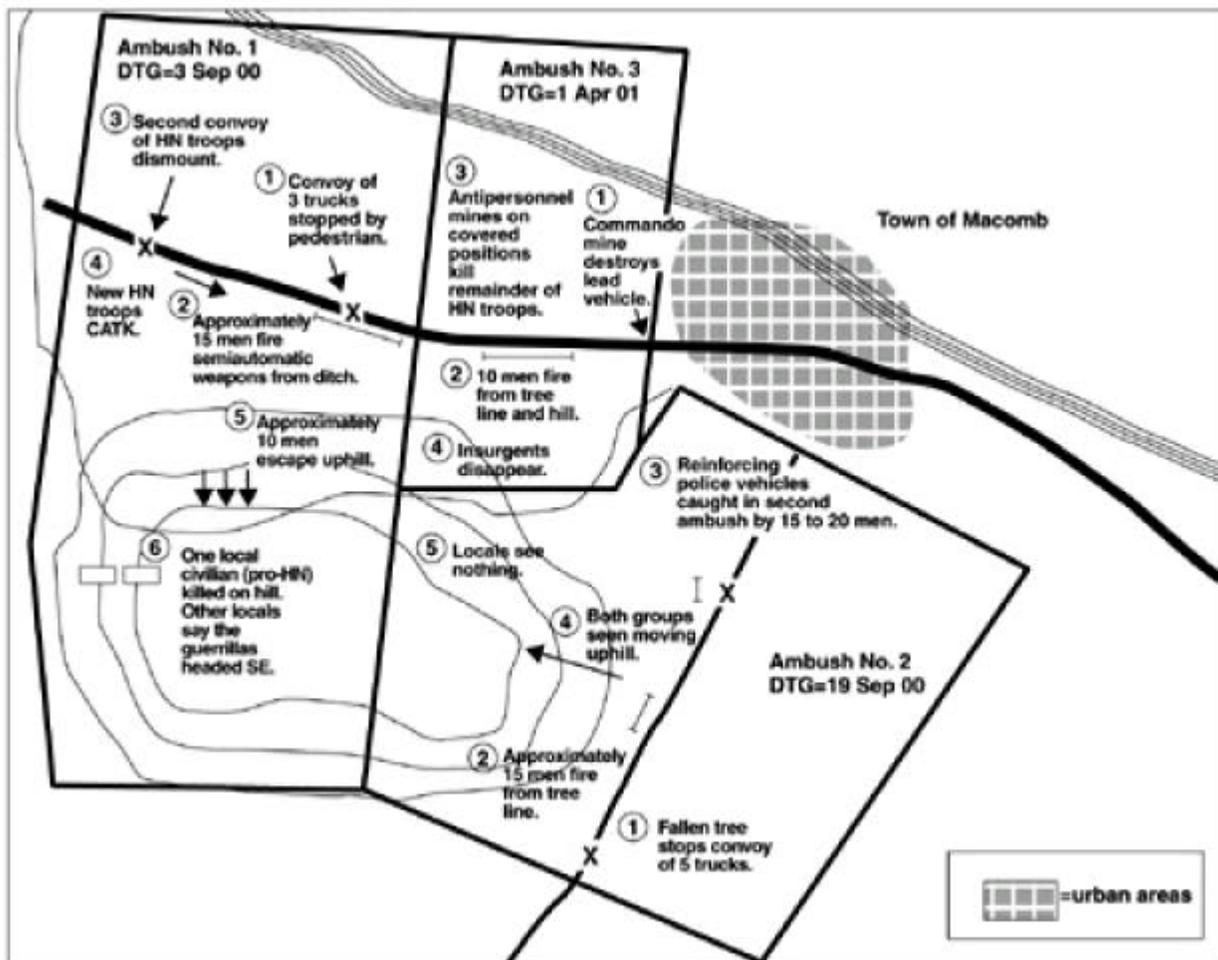
Figure 7-3. Coordinates Register.
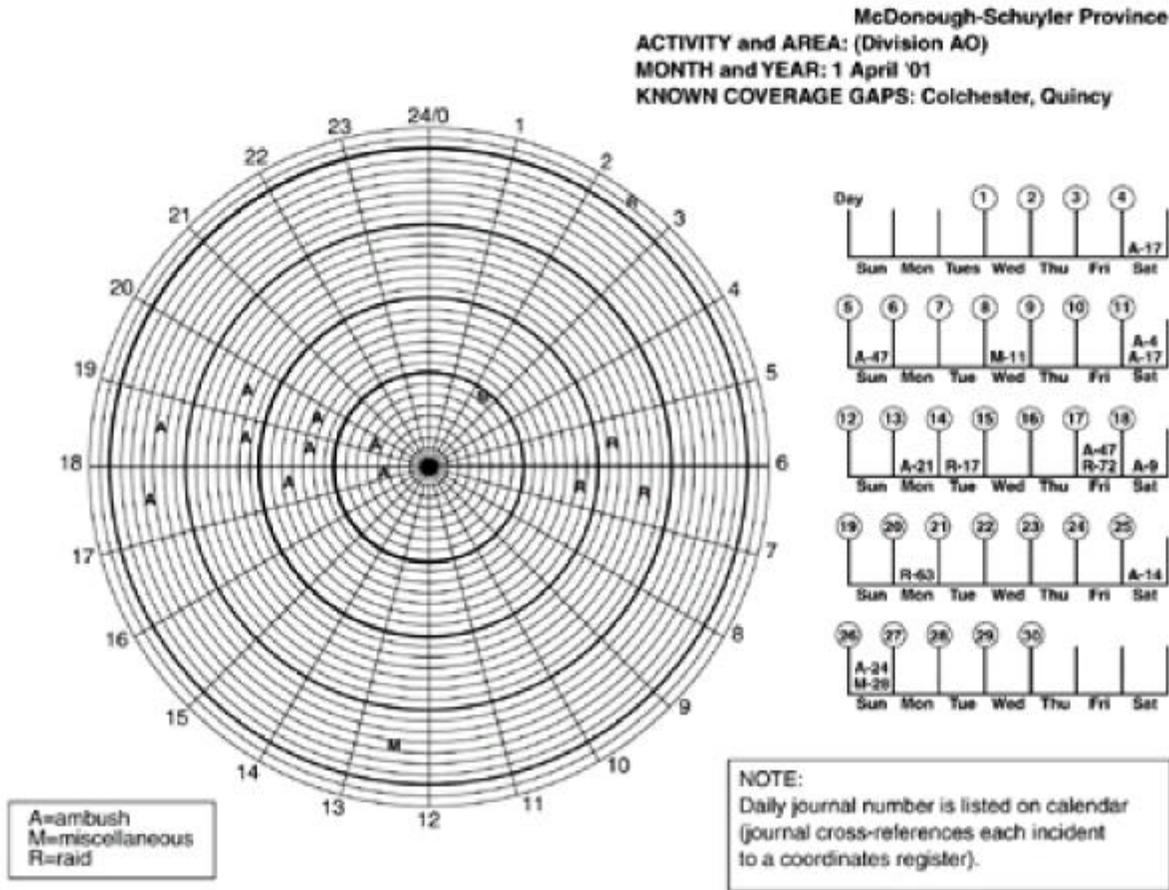
Figure 7-4. Pattern Analysis Plot Sheet.

week or month when threat activities occur. Used in conjunction with the coordinates register, the pattern analysis plot sheet identifies where, when, and how past actions occurred. This allows the analyst to use information derived from the coordinates register and pattern analysis plot sheet, to develop threat models and doctrinal templates, and to predict potential threat activity.

Matrix Analysis

Constructing a matrix is a simple, graphical way to organize a large volume of complex data. Matrices are used to show relationships between numbers of entities, such as people, incidents,

organizations, weapons, locations, functions, and actions. Analysts use activities and association matrices to organize a large volume of complex data, particularly in cases where the tracking of individuals and organizations is emphasized. Activities and association matrices are useful in analyzing insurgent, terrorist, criminal or drug trafficking activity.

Activities Matrix

Analysts use the activities matrix to link people to events or organizations. An activities matrix quickly displays which notable personnel within the AO are related to a particular organization or type of activity. This matrix can also link certain activities or incidents within the AO with organizations or units.

In figure 7-5, individuals are listed down one side, with organizations listed across the top. Reported relationships are noted on an individual's row that intersects the appropriate organization's column. This example demonstrates the use of dots to signify the confirmed, possible, or probable certainty of the relationship. The absence of a dot indicates either no relationship or a lack of information. The system used must be explained in a legend. To complete this particular example, the analyst created a remarks column to record significant information regarding each individual.

Legend: ● – confirmed ◐ – probable ○ – possible

Warrant	Remarks	Christian Reform Party (good guys)	Society for the Preservation of Order (SPO) (right wingers)	Farmer's Alliance (unknown peasant group)	People's Democratic Society (peaceful moderate)	Insurgent Company	New Liberation Movement (political front for New Metropolitan Edict [NME])	NME	Name of Individual	Group
Warrant Outstanding	Leader in the insurgent company. Possible platoon commander or company commander.					●	●	●	Johnston, S. D. alias "The Red"	Bandolph
	Possibly linked to death squad activities.	●	◐						Garra, N. A.	Bandolph
	Mayor, ineffective due to war-torn town.	●							Mulvhill, P.	Bandolph
	Possible platoon leader.	○		●	◐	○	○		Daniels, P.	Bandolph
	Regional governor.	◐	○	◐	●				Jenkins, T. L.	Malcolm
Warrant Outstanding	Tactical genius, principal trainer of insurgent company.					●	●	◐	Cormier, J.	Malcolm
				○		◐	◐	◐	Webb, C.	Malcolm
					◐	○	○		Seipel, B.	Malcolm
	Leader in the insurgent company. Platoon leader or executive officer.			○		◐	◐	◐	Trollinger, L.	Beards town
	Possible head of intelligence.					○	●	●	Ahearn, E.	Beards town
	Probable platoon leader.					◐	○		Timoney, J.	Beards town
Warrant						●	●		Thompson, J.	Beards town
Warrant	Probable heavy weapons platoon leader.					●	○	●	Bridgeford, R.	Beards town
	Possible liaison between insurgent company and the NME			◐	○	○		○	Halbleib, M.	Bushnell
	"Doctor of Death" leads the SPO.	●	●	○	○				Mueller, H.	Bushnell
Warrant						●	◐	◐	Martinez, E.	Bushnell

Figure 7-5. Activities Matrix.
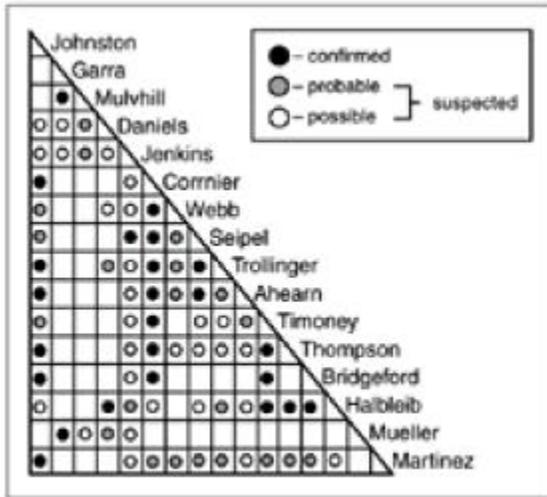
Figure 7-6. Association Matrix.

Association Matrix

The association matrix is used to show relationships between individuals. In figure 7-6, the individual names constitute both a column and a row. A dot indicates that a relationship exists. Through the use of the activities matrix, ana-lysts note individuals that are members of the same organization and indicate the relationship on the association matrix.

Link Analysis

Link analysis is a method of evaluating and displaying relationships and activities information that has been organized into matrices. In link analysis, pictures or symbols are used to display intelligence data that depicts relationships between people or entities. Analysts assess the reliability and validity of the intelligence data and assemble a link diagram to gain greater insight into the construction of a relationship network.

In figure 7-7, the link analysis diagram uses circles to represent people, squares or rectangles to represent organizations, and lines to represent their connections. Solid lines represent confirmed or strong relationships, while dashed lines indicate suspected or weak relationships. When
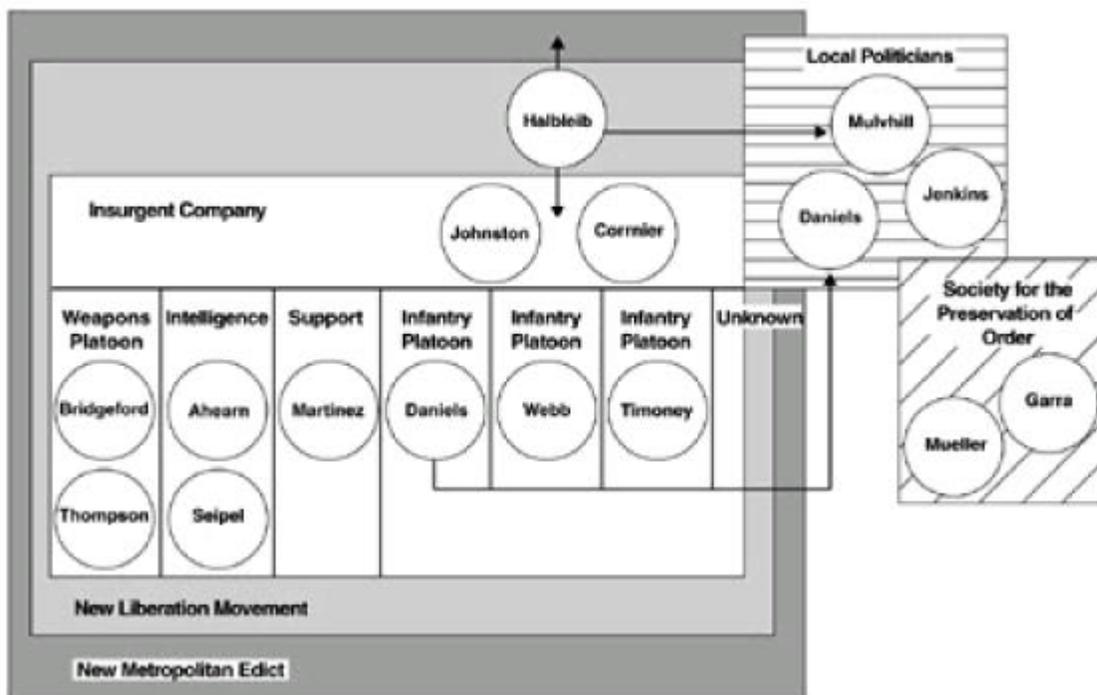
Figure 7-7. Link Diagram.

the analyst suspects that two people are actually the same person, the circles are overlapped. Circles and lines should be arranged so that their relationship lines do not cross. In complex cases, such as large groups, the circles should be arranged to keep the number of relationship-line intersections to a minimum.

The relationship of an individual to an organization can be shown a number of ways. When an individual is confirmed to belong to an organization, that individual's circle is placed within the organization's rectangle. By overlapping organizations, the analyst shows that an individual belongs to more than one organization and that there is a connection between the two organizations.

In cases where an individual is connected to but not a member of an organization, a line is drawn from the individual outside the organization to the rectangle representing the organization. If an individual's contact within the organization has been confirmed, the relationship line would be drawn between the circles representing the individuals.

Indicator List

The activities that reveal a COA are called indicators. Indicators are essential to discerning threat intentions. The analyst uses indicators to cross-reference specific events and activities with probable threat COAs and intentions. When used with other analytical tools (e.g., threat models, event templates, pattern analysis, matrices, and link diagrams), indicators are the key to estimative intelligence. During IPB, indicators are developed for each NAI to focus collection and analysis efforts. This list of indicators is constructed to satisfy the commander and staff's PIRs and IRs.

Indicator lists are formed by asking questions. Intelligence analysts develop a list of threat indicators by focusing on METT-T questions. Using METT-T, analysts determine what the threat must do and define the threat's probable activities (see the example below). These determinations become indications and warning.

Example: Forming an Indicator List Using METT-T

PIR: Will the threat defend objective C using a reverse-slope defense between 230600 to 270800 hours?

Mission: What does the threat commander accomplish by forming a reverse-slope defense?

Enemy: What types of units are available to conduct the defense? What units are necessary to construct and aid in the defense?

Troops and Support: Are threat troops experienced in reverse-slope techniques? What is their SOP for reverse-slope defense?

Terrain and Weather: Is objective C suitable terrain for a reverse-slope defense? If so, where is the most suitable terrain?

Time Available: How long will it take to develop a prepared defense versus a hasty defense? Will threat forces be able to prepare or assume a defense in the specified time period?

To further develop the indicator list, analysts can refine the questions developed using METT-T by breaking them down by battlespace functions. Information based on IPB, OOB factors, and experience aids intelligence analysts in deriving lists of activities that answer the commander's PIRs. These questions serve to narrow and focus on certain activities, equipment, troops, and training which an adversary must possess or do to accomplish their mission. For a representative listing of common tactical level indicators, see appendix C.

CHAPTER 8. TARGET DEVELOPMENT AND COMBAT ASSESSMENT

Successful MAGTF operations depend on an efficient, organized targeting effort to affect those enemy capabilities that could interfere with achievement of the friendly mission and objectives. The targeting process of detecting, selecting, and prioritizing targets requires coordinated interaction between intelligence, maneuver, fires, and planning elements of the MAGTF, joint force commander (JFC), Service components, and supporting agencies. This chapter introduces the targeting cycle, intelligence targeting support, the analyst's role in target development, and combat assessment.

SECTION I. TARGETING

Based on the friendly scheme of maneuver and tactical plans, targeting includes an assessment of the weather, terrain, and enemy to identify those enemy formations, equipment, facilities, and terrain which when attacked or controlled will ensure success. Through the targeting process, analysts develop a prioritized list of targets to be attacked and determine the weapons required to achieve the desired effects.

Targeting Cycle

Defined as deliberate or reactive, targeting is an integral part of the planning process that begins with receipt of the mission and continues through the development of the approved plan. Deliberate targeting is associated with fixed or semi-fixed targets, while reactive targeting is associated with mobile targets. Whether deliberate or reactive, the targeting cycle integrates intelligence, maneuver, fires, and C2 processes to assist the commander in deciding which targets to engage when, where, and to what effect.

Through the targeting cycle, fires planners and targeteers derive nomination lists of forces, installations, or locations that if attacked will promote the commander's warfighting objectives. The higher the command level performing the targeting process, the more formal it becomes and the more the process focuses on events well in the future. At the MAGTF or joint force level, the targeting cycle tends to be deliberate, encompasses greater resources, and involves—

- Establishment of commander's objectives, guidance, and intent.
- Target development, nomination, validation, and prioritization.
- Capabilities analysis.
- Commander's decision and force assignment.
- Mission planning execution.
- Combat assessment.

At lower tactical levels, the same process tends to be reactive, occurs in a shorter time span with less formality, and focuses on events of an immediate nature. The tactical-level targeting cycle is simplified to decide, detect, deliver, and assess

(D3A). Figure 8-1 depicts the joint targeting cycle and its relationship to D3A. Although intelligence is an integral part of each targeting cycle phase, intelligence P&A directly affects target development (decide) and effects assessment (assess).

Target Development

Target development is the analysis of potential enemy military, political, or economic systems to determine their significance and relevance to the commander's objectives, guidance, and intent. The analysis proceeds from broad systems to specific components and finally to individual elements or aim points. Analysts evaluate system components and interrelationships to establish their criticality to the threat's operation and their vulnerability to attack. Through this systematic evaluation, analysts develop targeting strategies to select potential targets and to determine the type of damage that will accomplish the friendly commander's defined objective. Objective definition and target development must comply with the commander's guidance, law of armed conflict, and rules of engagement.

Analysts evaluate each target's lethal and nonlethal capabilities to develop a prioritized list of targets and the intelligence requirements that support target acquisition and combat assessment. The scope, level of detail, and time involved depend on the situation and the level of command conducting targeting. Common processes and procedures employed in target development include IPB, target value analysis, HPT identification, and use of the high-payoff target list (HPTL).
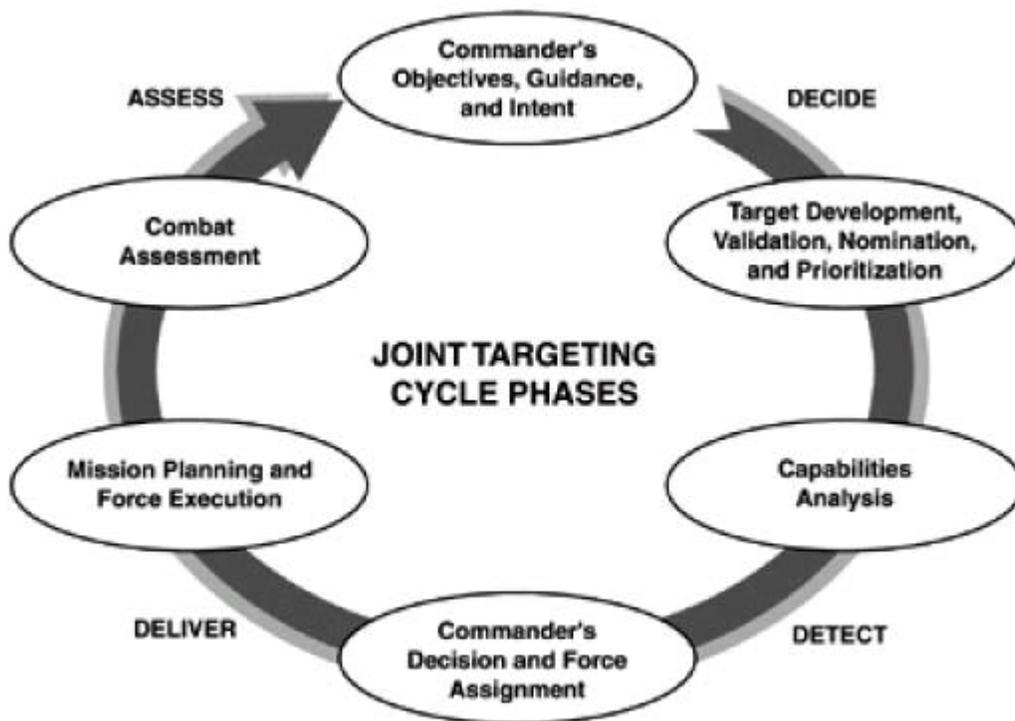
Figure 8-1. Joint Targeting Cycle and D3A.

Intelligence Preparation of the Battlespace

Through the IPB process, intelligence analysts contribute to target development by—

● Determining the threat commander's COAs through systematic analysis of the region, weather, terrain, and doctrine.
● Evaluating doctrinal templates to identify a threat's COGs, critical vulnerabilities, and HVTs.
● Constructing situation templates and examining the threat commander's decision cycle and each potential COA's decision points to refine HVTs.
● Wargaming, mentally, each COA and the threat commander's decisions to identify his key assets as HVTs.
● Developing event and decision support templates to help identify NAIs, decision points, decision phase lines, TAIs, and HPTs.
● Analyzing the threat's target systems, complexes, and components to develop their relevance and importance.

Target Value Analysis

Target value analysis is a method of identifying and ranking potential HVT sets in a COA. The target analyst, in coordination with the G-3/S-3, G-2/S-2, fire support coordinator, and other staff members, war game the COAs to—

● Finalize individual staff estimates.
● Develop a fire support plan, a scheme of maneuver, as well as friendly and threat decision support templates.
● Determine critical assets required by the threat commander to accomplish his mission.

High-Value and High-Payoff Target Identification

An HVT is an asset that the threat commander requires for the successful completion of a mission. Its loss to the threat can be expected to contribute to substantial degradation of an important battlespace function. Contributing to the targeting development process, G-2/S-2 section personnel, the fire support coordinator, and other staff members identify key threat assets that must be dealt with and nominate HVTs to be HPTs. The key to HPTs is that they are based on the friendly commander's scheme of maneuver.

The HPTs are developed during the wargaming process. As the staff fights the different options, the G-2/S-2 identifies specific HVTs. The HPTs for a specific phase of the battle are recorded on the decision support template and synchronization matrix. Those locations where HPTs are expected to appear become TAIs.

The G-2/S-2 and/or collection manager evaluate HVTs at different points in the battle to determine required collection asset capabilities and to provide the necessary target resolution. This evaluation becomes the basis for the collection plan for intelligence support to targeting. Because of their importance, HPTs receive priority in the allocation of detection systems. The G-2/S-2 and the commander must consider the impact the priority will have on maintaining situational awareness, because the same collection assets are used for targeting and battlespace awareness.

The fire support coordinator, air officer, electronic warfare officer, C2W and other representatives use their knowledge of friendly lethal and nonlethal means to determine if a capability exists to attack the HVT and the expected effects of the attack. The G-2/S-2 then assesses the threat response. This effects-based targeting assessment sequence helps determine if attacking the HVT is necessary to ensure the success of the friendly force. If the HVT is acquirable, attackable, and capable of ensuring friendly success, it becomes an HPT. The HPTL identifies prioritized HPTs for a specific battle point.

High-Payoff Target List

The commander-approved HPTL is a tool in determining attack guidance and in developing targeting intelligence collection, production, and dissemination plans.

Collection

Collection efforts focus on NAIs and TAIs that the IPB process identifies during the decide phase. Knowledge of target type and its associated signatures (electronic, visual, thermal) enables friendly forces to direct the most capable collection asset to be tasked against the target. The asset is positioned in the best location based on friendly estimates of when and where the threat target is located.

The decision to destroy, degrade, disrupt, or delay a given HPT results in a requirement to detect that target. Intelligence needs to support the detection of the target are expressed as PIRs and IRs. The PIRs and IRs that support detection of a target are incorporated into the collection plan. The collection manager translates the PIRs and IRs into ICRs and supporting specific IRs. The collection manager considers the availability and capability of MAGTF and external collection assets.

Production

Production efforts focus on developing timely, tailored intelligence products to meet maneuver and fires needs.

Dissemination

Dissemination efforts focus on ensuring CIS readiness to support both routine and time-sensitive intelligence reporting in support of MAGTF targeting needs.

Target Analysis

Target analysis helps to determine the military importance, priority of attack, scale of effort, and weapons required to obtain a desired level of damage or casualties. Other considerations for analysis include target criticality, accessibility, and recognizability. While target analysis helps to determine which targets to hit, operations planning determines how to do it. At strategic and operational levels of war, targeting is more deliberate and focuses on fixed installations or large arrays of targets.

At the tactical level, the MAGTF commander has capabilities to strike deep targets that support threat maneuver or ground forces. These targets are often complex groupings of installations, units, and defenses that may require a methodical approach to ensure success. This methodology is referred to as target system analysis.

Target System Analysis

A target system includes installations, facilities, or forces that are functionally related and situated in the same geographical area. A target system comprised of components and elements can be either fixed installations or mobile target sets. While an individual target may be significant based on its characteristics, its worth is usually derived from its relative importance within the target system. Target system elements are smaller, more intricate parts of the target system than the component and are necessary to the operation of the component. Figure 8-2 depicts the relationship of a target system, its components, and its elements.

Components

A target system's components can also be targets, such as airfields, which are a component of an air defense system. Within industrial or economic systems, a system component belongs to one or more groups of industries or basic utilities
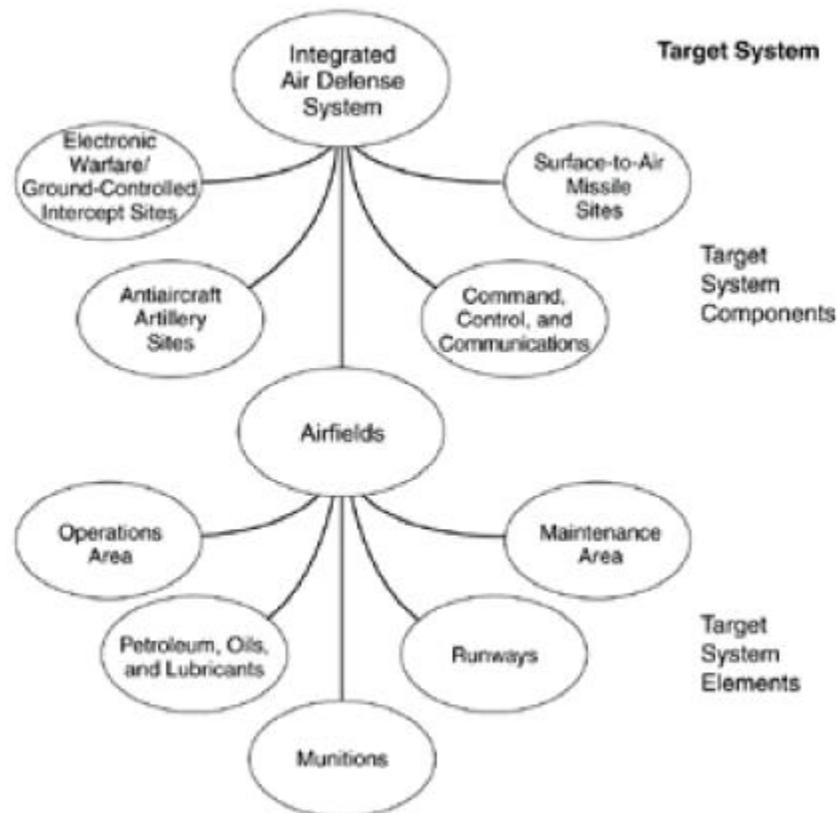
Figure 8-2. Target System, Components, and Elements.

required to produce individual parts of an end product. Target system components can also refer to component services. For example, an air defense system may include C2, early warning and target acquisition radars, antiaircraft artillery and surface-to-air missile batteries, support facilities, and other components that are neither industries nor utilities.

Activity

Target system activities encompass those actions or functions performed by the target system components in pursuit of system goals. By this definition, a combined-arms maneuver division could be viewed as a target system, with components that include air defense units, artillery, armor, mechanized infantry, and engineers. The target development process should focus on the

activity of the system or its components. Analysts conduct a comprehensive evaluation of target system components and elements to understand the activities of the total system.

Once analysts have identified the enemy activity that must be affected or defeated, they can determine the key target systems, components, or elements that should be attacked, degraded, or exploited to produce the desired effects. For example, enemy air attacks against friendly ports and LOCs may seriously threaten resupply of friendly forces. To modify or defeat this enemy activity, targeteers analyze the enemy's air force system and identify threat system components and elements. They target the enemy aircraft home bases and identify runways; petroleum, oils, and lubricants storage; and maintenance facilities as potential target elements, which

friendly forces should modify to defeat the enemy's air attack activities.

Linkage

Analysts must understand the linkage or connection between installations performing identical, similar, related, or complementary activities or functions. To develop targets, analysts identify critical nodes or points where target system components and elements are linked and dependent upon each other. These key nodes also exist where target systems interact with other target systems. Matrix and link analysis, as discussed in chapter 7, are highly effective tools for determining linkages and critical nodes.

Target development focuses on identifying the critical nodes within target systems that will satisfy objectives. For example, an enemy's air defense system consists of a number of components, such as surface-to-air missile sites, early warning and ground-controlled intercept sites, antiaircraft artillery sites, and airfields. To function effectively, the elements are linked at a sector headquarters, which exercises responsibility for a specific geographic area. Analysts would target these sector headquarters to sever the critical node within the air defense system.

Target Complex Analysis

A complex is a group of physical elements in close proximity containing multiple target elements that are integrated to contribute to some function of military or civilian value. For example, a system of military airfields distributed throughout the country is made up of individual airfields (e.g., target complexes), containing multiple elements (e.g., individual aircraft, runways, hangars) in close proximity.

After target system analysis identifies a critical target complex, target complex analysis identifies the target environment and defenses associated with the complex. Target complex analysis is used to determine specific targets within the complex as well as supporting actions (e.g., defense, suppression, deception, tactics) that may be necessary to attack the target.

Target Element Analysis

A target element is the smallest identifiable activity of a target component (e.g., sheltered aircraft, control tower, defensive radar site). Based on the targeting objectives, target elements are evaluated as targets for attack. Detailed analysis must be conducted on the individual target element. When conducting target element analysis, the target intelligence officer is responsible for evaluating the element's—

- **Location**—Exact location expressed in geographic or UTM coordinates.
- **Elevation**—Altitude above sea level of the element's ground location expressed in feet or meters.
- **Identification**—Accurate determination of—
  - **Type**—Brief description of the target's military functions.
  - **Size**—Length, width, and height dimensions.
  - **Shape**—Definition of the spatial form.
  - **Attitude**—Azimuth of the element's long axis expressed in degrees (090-270) or descriptive words (east-west).
  - **Dispersion**—Pattern of individual elements in the target area expressed as a short word-picture description.
- **Vulnerability**—Susceptibility to fire.
- **Recuperability**—Time required for enemy to reactivate the target or reconstitute it in another location.
- **Importance**—Value within the enemy's operation and degree to which destruction of the potential target would reduce the enemy's capability.

Role of the Target Analyst

Target analysts should complete the following steps when conducting target P&A:

- Collect target information and intelligence.

- Collate data.

- Evaluate potential list of targets.

- Construct flow of threat target component, complex, and system.

- Determine most suitable targets.

- List targets and priorities.

- Present recommendation.

- Refine data and develop required intelligence products.

Target Analysis Products

Analysis products used in target development include a target list, no-strike target list, restricted target list, target files, and collection requirements.

List of Targets

Target intelligence analysts conduct a thorough analysis of targets and coordinate with the other P&A personnel and the G-3/S-3 maneuver and fires targeting team to provide required intelligence supporting the list of targets for the commander's consideration. The fire support coordinator maintains and prioritizes the list of targets in order of relative importance to the commander's objectives. The operations section and ultimately the commander are responsible for validation of targets and formulation of the commander's target list, which is derived from the HPTL developed during IPB and COA wargaming.

No-Strike Target List

During the target validation process that occurs during target development, some potential targets are placed on a no-strike list. Commanders designate no-strike targets, which are prohibited from attack, to avoid—

- Interference with military operations.

- Damage to relations with indigenous personnel or governments.

- Violation of international law, conventions, or agreements.

No-strike lists are nominated by elements of the joint force and approved by the JFC. This list also includes no-strike targets directed by higher authorities. Examples of no-strike targets include—

- Hospitals.

- Schools.

- Places of worship.

- Cultural shrines.

Restricted Target List

This list is composed of targets with specific restrictions. Actions exceeding those restrictions must be coordinated with the establishing headquarters. Restricted targets are nominated by elements of the joint force and approved by the JFC. This list also contains restricted targets directed by higher authorities. The decision to restrict a target centers on the importance of the target to the threat and the plans and intentions of the friendly commander. The following are examples of restricted targets:

- An area in which a friendly reconnaissance team is operating. To avoid fratricide, fires may be placed into the area, but only upon coordination with the establishing headquarters.

- A bridge identified by a commander as critical to future operations. To ensure the bridge is available to friendly forces, this target may be restricted as to the type of ordnance that can be used against it or the level of damage that may be inflicted on it.

Target File

A target file contains pertinent target system, complex, or component information collected during the target development process. Information in the target file is used to build target studies once HPTs are approved or validated. Generally, target files deal with fixed or semi-fixed targets. This information may be in the form of—

- Data bases.
- Selected imagery.
- Graphics.

Collection Requirements

Throughout the target analysis process, analysts identify targeting intelligence gaps and develop ICRs to obtain needed data. The ICRs must be stated early and clearly in the form of PIRs, IRs, and specific IRs. Analysts and planners have to think beyond the traditional picture (i.e., imagery) and use intelligence sources such as SIGINT, HUMINT (i.e., defectors, refugees, prisoners of war, travelers, aircrew debriefs, and special forces), and other sensor data that can provide indications of a target's status. Gaining a familiarity with collection system capabilities is critical. Requesters should recognize the various intelligence sources' strengths and limitations and understand how to best exploit them.

Target or Objective Studies

Once the commander approves a target, intelligence sections develop target or objective studies to support mission planning. These studies are focused, detailed intelligence products that aid in the application of fires or the maneuver of forces against a specific target set or area. Smaller MAGTFs and units use these studies for mission preparation and execution.

Target or objective studies are graphically oriented and may use many of the graphics derived during the IPB process, such as a target folder. Depending on the specific mission, the study may contain the following information:

- Orientation graphic.
- Time-distance graphic.
- Weather forecast.
- Hydrographic forecast and astronomical data.
- Intelligence briefing notes for mission.
- Graphic intelligence summary.
- Objective area graphic enhancements, such as—
  - Orientation graphic (10–20 km around objective).
  - Mission planning graphic (5 km around objective).
- Objective area imagery.
- Imagery and graphics of insertion points.
- Survival, evasion, resistance, escape plan.
- Challenge and reply passwords.
- Mission-specific data as required.

SECTION II. COMBAT ASSESSMENT

The final step of the targeting cycle, combat assessment is the determination of force and weapons system employment effectiveness during military operations. The combat assessment objective is to identify recommendations for the course of military operations. A G-3/S-3 responsibility, combat

assessment is performed as a coordinated effort by the operations, intelligence, and fires staffs. Conducted at strategic, operational, and tactical levels of war and MOOTW, the combat assessment process is used by analysts to—

● Provide the commander with information on the status of an operation.

● Help formulate subsequent battle plans.

● Serve as a benchmark for validating objectives.

● Collect data on weapons and weapons system performance.

The three components of combat assessment are BDA, munitions effects assessment (MEA), and reattack recommendations (RR). Intelligence analysis has a major role in determining BDA, which includes physical damage, functional damage, and target assessment (see fig. 8-3).
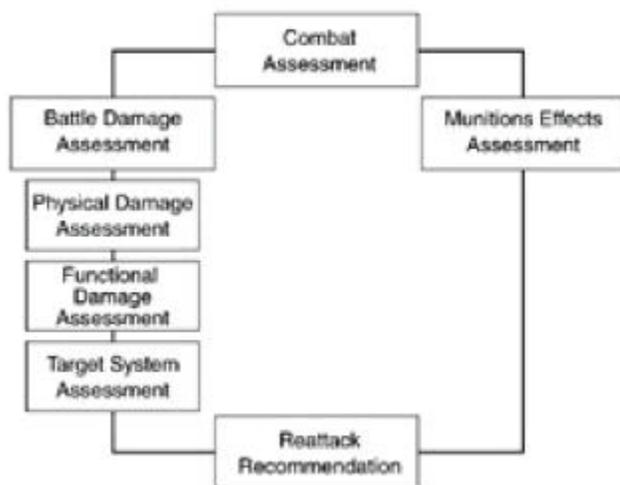
Figure 8-3. Combat Assessment Process.

Battle Damage Assessment

A key component of the combat assessment process, BDA is the timely and accurate esti-mate of damage resulting from the application of military force, either lethal or nonlethal, against an objective or target. Primarily an intelligence responsibility, BDA requires extensive coordination with operations and fires elements. The BDA is munitions-independent (air, ground, naval, and special forces weapon systems) and is target-independent (fixed strategic and mobile or movable tactical targets).

Munitions Effects Assessment

Munitions effects assessment is analysis of the friendly military force in terms of the weapons system, munitions, and weapon delivery parameters to increase force effectiveness. While the operations and fires staffs are responsible for MEA, the MEA is conducted concurrently and interactively with BDA, which is conducted by the intelligence staff.

Reattack Recommendations

Based on results of BDA and MEA, the operations and intelligence team make RRs for the target nomination and development process. The RRs should address operational objectives relative to the target, target critical elements, and enemy combat forces. When making RRs, the operations and intelligence team considers the—

● Current level of achieved operational and tactical objectives.

● Weapons systems and munitions.

● Target and aimpoint selection.

● Attack timing.

Battle Damage Assessment Components

Physical damage assessment (PDA), functional damage assessment (FDA), and target system assessment (TSA) are three subcomponents of BDA.

Physical Damage Assessment

Referred to as Phase I BDA, the PDA is a quantitative estimate of physical damage that occurs to a target through munitions blast, fragmentation, and fires. This assessment is based on observed or interpreted damage.

The unit controlling the weapons system and the intelligence collection observers develop Phase I BDA reports. Figure 8-4 illustrates the flow of Phase I BDA.

For example, visual observation of an enemy artillery battery (the target) verifies four self-propelled howitzers with shattered and dislodged tubes, recoil mechanisms, and turrets. Track damage to one howitzer is noted. Another
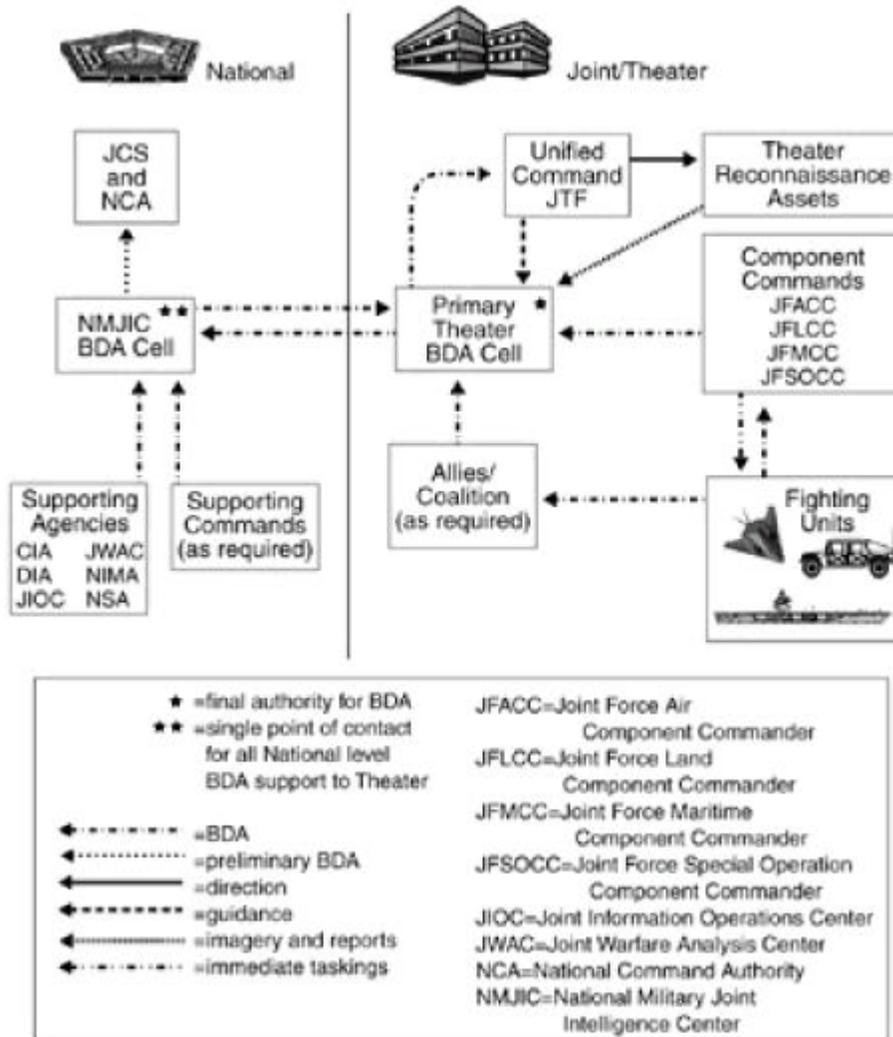
Figure 8-4. Phase I BDA or PDA Information Flow.

howitzer has no visible damage. The PDA of the battery is 65 percent destroyed. The PDA for large, complex targets is keyed to specific aim-points and critical elements.

Combat Strength Assessment

When dealing with threat ground combat units, the more common term for Phase I BDA or PDA is combat strength assessment. Combat strength is the actual strength on hand of a ground unit in terms of operational tanks, armored vehicles, and artillery. This strength is expressed as either a count of generic type equipment or as a percentage of the T/O and T/E. Threat combat strength is a critical factor to commanders preparing for combat. During operations, commanders rely on combat strength assessment to account for enemy losses and to assess remaining enemy strength.

Combat Strength Baseline

Prior to operations, analysts establish the combat strength baseline of beginning strength numbers. These numbers remain constant for the duration of combat and serve as a benchmark against which losses or gains are measured (see table 8-1). The baseline combat strength represents the maximum amount of equipment possible for a unit, while combat losses represent verified losses.

Table 8-1. Example of Combat Strength Assessment.

105th Mechanized Infantry Division	Tanks	Armored Vehicles	Artillery
T/E	102	135	45
Beginning Strength	98	135	42
Combat Losses	17	22	4
Replacements	6	3	0
Combat Strength	87	116	38
Percent of T/E	85	85	84
Current Combat Strength = 85%			

Combat Strength Computation

Combat strength for each type of equipment is computed by subtracting the confirmed losses from the beginning strength and adding the replacements to that total. The percent of T/O and T/E is calculated by dividing the combat strength by T/O and T/E numbers. The T/O and T/E percentages are totaled and divided by the number of equipment types to determine the current combat strength for the assessed system. Note that while the baseline combat strength represents the maximum amount of equipment possible for a unit, combat losses represent only verifiable losses. Current combat strength can be viewed as a worst-case estimate since it only takes into account confirmed losses. Replacements are included when known. Equipment categories are limited to generic types.

Personnel Losses

Personnel are not normally included in determining combat strength. Acquiring accurate casualty figures and accounting for replacements is extremely difficult, and past experience has shown that body counts are often misleading. A more appropriate and meaningful assessment of the impact of personnel losses can be made as part of combat effectiveness assessment. In MOOTW, however, where personnel may be the threat's principal strength, personnel losses may have to be tracked and combat strength assessed accordingly.

Functional Damage Assessment

The FDA is an estimate of the friendly military force's effect on degrading or destroying the functional or operational capability of the target and an evaluation of the friendly force's operational objective success level. This assessment is based on all-source intelligence and includes an estimate of the time required for reconstitution or replacement of the target function. The FDA is also referred

to as Phase II BDA. Figure 8-5 illustrates the Phase II BDA information flow.

Target System Assessment

The TSA is a broad assessment of the friendly military operations impact and effectiveness against a target system capability. This assessment may be used to measure the threat's combat effectiveness. Based on the commander's operational objectives, a TSA may address significant target system subdivisions.

Analysts compile individual target FDAs to produce TSAs, which are applied to the current system analysis or OOB. For example, the threat's fire support system is known to have 21 artillery battalions. Partial destruction of one battery has minor impact on the effectiveness and capability of the threat's overall fire support system. A complex and resource intensive process, TSA is generally performed at the theater level. The TSA is also referred to as Phase III BDA. Figure 8-6 illustrates the Phase III BDA information flow.
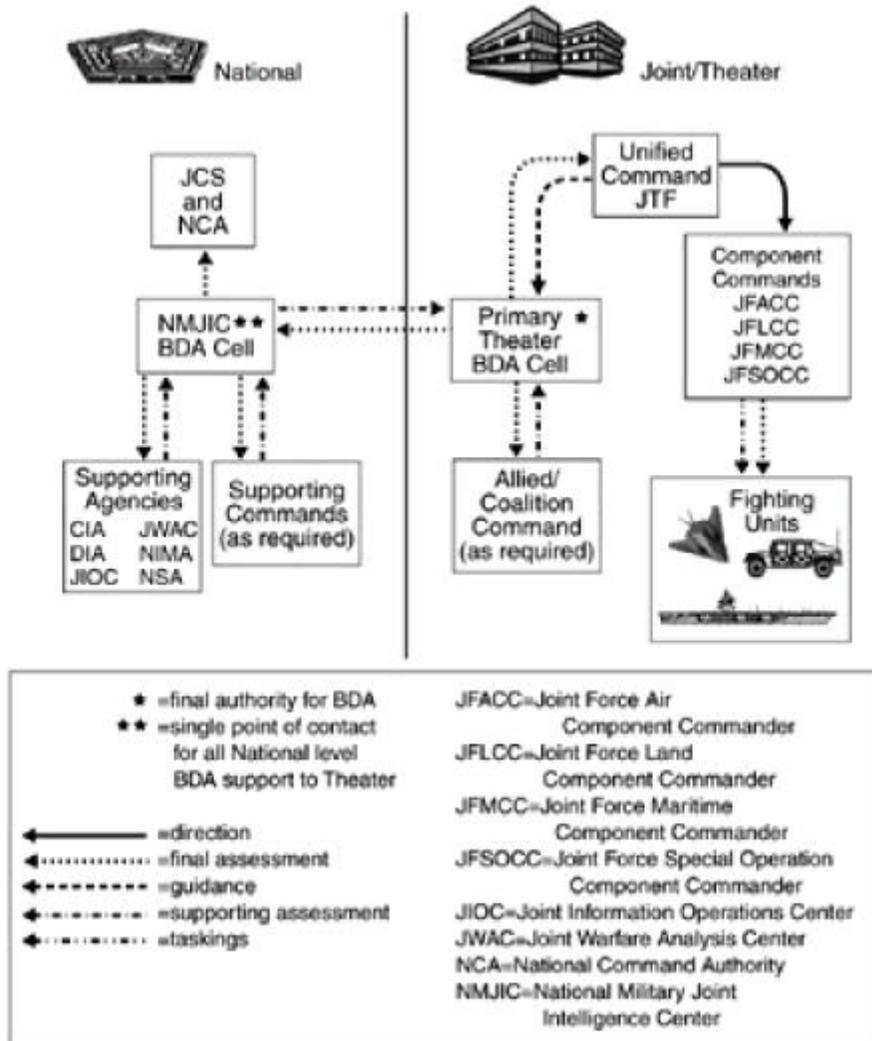
Figure 8-5. Phase II BDA or FDA Information Flow.
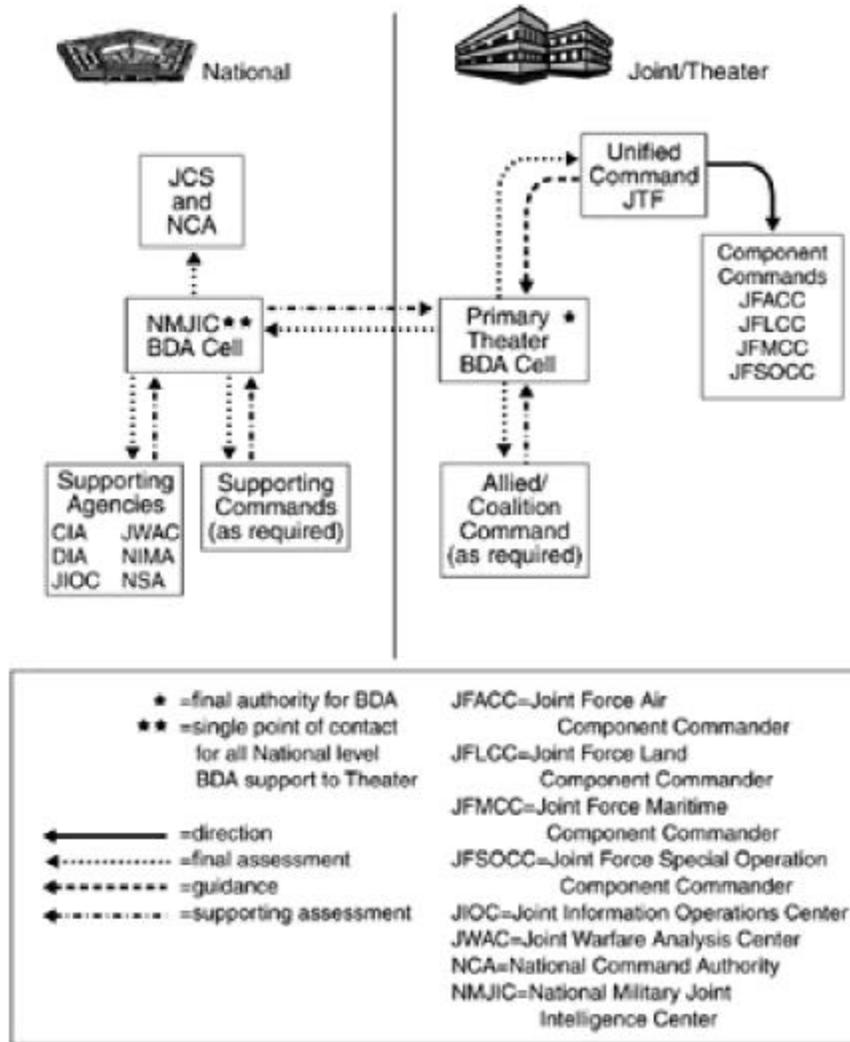
Figure 8-6. Phase III BDA or TSA Information Flow.

Responsibilities

The intelligence officer and the MEF ISC integrate intelligence and operational weapons system and munitions effects data provided by the G-3/S-3 to determine the effects of an executed COA on threat strength and combat effectiveness. In coordination with the G-3/S-3, the intelligence officer or ISC—

- Recommends HVTs.

- Develops and recommends IRs to include those for targeting and BDA.

- Coordinates with the G-3/S-3, air officer, and fire support coordinator to develop coordinated targeting, intelligence, BDA, MEA, and RR plans.

- Develops integrated collections, production, and dissemination plans to answer the commander's IRs.

- Requests collection and production support for intelligence required to satisfy targeting objectives and BDA.

- Establishes procedures to ensure observation reports from forward observers, reconnaissance, pilots, etc., are readily available to BDA analysts.

● Matches BDA against the commanders objectives to determine targeting success and refines intelligence estimates of the threat's situation and capabilities, recommends target reattack, develops and maintains historical BDA data bases, and disseminates hard and soft copy intelligence and BDA products.

● Uses the results of BDA and combat assessment in determining the need to further develop enemy COAs.

Battle Damage Assessment Methodology

After the commander identifies PIRs, IRs, and targeting priorities, the intelligence officer or MEF ISC tasks intelligence collection assets to locate, identify, and track designated targets and directs production assets to plan and prepare needed intelligence products. The ISC, fire support coordinator, and air officer coordinate to identify the appropriate attack system to capture, destroy, degrade, suppress, or neutralize the target.

Based on targets and conditions set by the commander, the ISC refines the commander's BDA-related requirements and integrates them into the intelligence operation plan. These BDA requirements are answered through execution of the intelligence cycle.

As targets are attacked, the ISC coordinates P&A cell's BDA through execution of the intelligence cycle. The commander uses BDA to decide if the target should be reattacked or if the objectives have been met. Once a BDA-related PIR is satisfied, the commander decides if there is a need to establish a new BDA-related PIR or if limited intelligence assets will be used to support another aspect of the mission. The BDA-related PIRs should only address the commander's most critical requirements.

Tactical-level BDA provides a series of timely and accurate snapshots of the effect operations are having on the threat. The BDA helps commanders determine when or if their targeting effort is accomplishing goals and objectives and provides commanders the information needed to quickly allocate or redirect forces.

Battle Damage Assessment Principles

The intelligence officer must work closely with the commander and staff to ensure they know the characteristics and limitations of BDA, which is viewed in terms of objectivity, reliability, and accuracy.

Objectivity

The BDA must be objective and supported by the most reliable data available. Generally, data collected through objective means (imagery) are more reliable than data collected through subjective means (pilot reports). The intelligence officer and ISC should strive to verify conclusions and resolve discrepancies in BDA reporting. It is particularly important to maintain BDA objectivity when BDA becomes the deciding factor for determining and executing a specific COA or decision. When disseminating intelligence, the ISC must make a distinction between facts and estimates.

Reliability

The quantity and quality of available collection and production assets impact BDA reliability. The degree of reliability and credibility of the assessment relies on the resources employed for BDA collection. Collection and production assets must be properly balanced, managed, and supervised to produce reliable reports that are concrete, quantifiable, and precise.

Accuracy

To obtain accurate BDA information, the AO must be frequently and adequately covered by a combination of national, theater, and tactical collection and production assets. Frequent coverage is necessary to accurately determine pre- and post-strike damage.

Battle Damage Assessment Reporting

The intelligence officer or ISC ensures BDA reports conform to the operational plan, reports target damage and destruction, and assesses the degree of mission success. When possible, BDA reporting includes the visual verification of physical damage and an analysis of the damage effects on the threat unit. The MAGTF and subordinate elements are primarily concerned with reporting Phase I BDA or PDA.

Reports

Reports used in BDA include—

- Mission reports and in-flight reports.
- Aircraft cockpit video or weapons system video.
- Imagery and IMINT (e.g., national, theater, and tactical imaging systems, UAVs).

- SIGINT.
- HUMINT.
- Open source intelligence (e.g., television broadcasts, radio broadcasts, newspapers).
- Visual reports from combat units, air controllers, or forward observers.

Reporting Methods

The intelligence officer compiles, refines, and validates the various sources of BDA and develops consolidated PDA or combat strength assessments. The MSCs and major subordinate elements forward consolidated BDA reports to the MEF, usually covering set time periods. See appendix D for an example of a consolidated BDA report format.

At the MEF level, P&A company, intel bn, is responsible for compiling MEF Phase I BDAs or PDAs and for adjusting master OOB data bases to reflect threat combat losses. The BDA cell also prepares and disseminates formal Phase I BDA reports according to theater and national policies and procedures. Defense Intelligence Report, DI-2820-2-99, *Battle Damage Assessment (BDA) Reference Handbook (U)*, provides detailed joint procedures and formats regarding BDA analysis, reporting formats, standard terminology, and resources. This final draft document is available on-line via INTELINK and INTELINK-S.

CHAPTER 9. INTELLIGENCE PRODUCTION

Intelligence production is the conversion of information into intelligence through the integration, analysis, evaluation, interpretation, and synthesis of all-source data and the preparation of intelligence products in support of known or anticipated user requirements. Production involves translating the results of analysis into usable intelligence products that are timely and tailored to the unit, subordinate units, and other supported commands' missions and IRs. The analyst must strive to provide knowledge and understanding that the decisionmaker can visualize and absorb. If possible, that knowledge and understanding should be presented in the form of coherent, meaningful images rather than in the form of accumulated lists, texts, or data fields. During the production phase of the intelligence cycle, information is—

- Evaluated to determine pertinence, reliability, and accuracy.
- Analyzed to isolate significant elements.
- Integrated with other relevant information and previously developed intelligence.
- Interpreted to form logical conclusions, which bear on the situation and support the commander's decisionmaking process.
- Applied to estimate possible outcomes.
- Placed in a product format that will be most useful to the user.

During MAGTF CE deliberate planning, production normally entails the development of detailed, all-source intelligence estimates and studies through the combined efforts of several intelligence and reconnaissance operation elements. During tactical execution, time constraints and ongoing battle demands require rapid processing and production with an emphasis on development of simple, mission-focused intelligence products (e.g., annotated image, target description, overlay depicting current and future threat dispositions). The value of intelligence production is measured in terms of time or resources expended and how well it places information into context, converts it into knowledge and understanding through analysis and synthesis, answers the PIRs and IRs, and applies that knowledge to the decisionmaking process.

There is an inherent friction between the desire to provide as complete and accurate an intelligence product as possible and the continuous requirement to support the time-sensitive urgency of tactical decisionmaking. In practice, these conflicting demands must be balanced by using both stated direction, such as the commander's intent and PIRs, and knowledge of the operational situation to determine when to finish and disseminate a product. To provide a framework to make these determinations, intelligence production is viewed as occurring on deliberate and immediate levels.

Production Categories

In the MAGTF, the primary categories of production are deliberate and immediate.

Deliberate Production

Deliberate production is employed when there is sufficient time to thoroughly evaluate, analyze, and synthesize available information and intelligence. The results of deliberate production efforts are formal, comprehensive intelligence products. Intelligence products that fit into this category include—

- Contingency intelligence studies.
- Detailed, fully developed IPB studies.
- Intelligence estimates.
- Target or objective studies.

Immediate Production

Immediate production is a time-limited, highly focused effort that satisfies an immediate tactical requirement. This type of production involves the rapid processing, analysis, production, and dissemination of intelligence to influence tactical decisionmaking. Often, immediate production is facilitated by, and builds on, a previously completed deliberate production effort.

Elements of data are subjected to a compressed version of the production cycle, and the resulting product is rapidly disseminated to those who are affected. Immediate production is normally conducted during execution and results in simple, mission-specific intelligence products (e.g., situational assessments or answers to specific, individual intelligence requirements).

The nature of the situation and pertinent intelligence requirements dictate the amount of time available to complete each production effort. Intelligence products that fit into this category include—

- Intelligence reports that provide alarm or warning information.
- Reconnaissance and surveillance data related to decision points for branches or sequels.
- Reactive targeting intelligence or hastily prepared intelligence briefings for initiation of small unit action.

Principles

Whether deliberate or immediate, intelligence production is guided by the following principles.

Purpose and Use of Intelligence

To understand the needs of the consumer and to answer the IRs, the producer must know the user's command level, mission, IRs, time sensitivity, responsibilities, and purpose of the intelligence products.

Objectivity

Producers must be objective and unbiased to avoid any tendency toward preconceived ideas. When conflicting information exists, efforts should be made to resolve the difference. If time and resources are inadequate to provide explicit intelligence, the commander must be made aware of the uncertainty. Commanders need pertinent intelligence, including conflicting or contradictory information and opinions.

Provision of Integrated and Tailored Products

Intelligence analysts integrate and tailor information from multiple sources to provide decisionmakers with a clear picture of the battlespace.

Coordination Among Echelons

Intelligence production should be coordinated between national, theater/operational, and tactical-level echelons. The JTF intelligence officer directs and coordinates production activities to ensure they are mutually supporting and not duplicative. Forces at every echelon accomplish joint and combined operations intelligence production, which includes Service-unique products at component commands and operating forces. Higher echelons use organic collection assets and production capabilities to produce intelligence and to refine and compile intelligence received from subordinate units and external organizations. Subordinate units use intelligence products sent to them by the senior command to determine or adjust their mission and operations.

Responsibilities

Higher echelons are responsible for ensuring subordinates are provided the required intelligence exceeding the subordinate's organic capabilities. To provide subordinate commands with required intelligence products and services, higher echelon commanders and intelligence officers identify and task organizations

that can contribute to resolution of subordinate commanders' IRs.

Management

Production management ensures effective and efficient intelligence production in support of operations. Intelligence personnel must receive, review, validate, prioritize, and coordinate production requirements to determine the task, producer, forms, and production schedule.

Production Cycle

The goal of the intelligence cycle is to produce timely, usable intelligence. The production cycle is in essence the intelligence cycle, with the constituent parts of directing, collecting, processing and exploiting, analyzing, and finally producing, disseminating, and using the intelligence. The production cycle spans months or minutes, depending on the level of command conducting production and the nature of the IRs. During the production cycle process, intelligence section personnel must focus on delivering the product in a timely, tailored, complete, and usable manner.

Define Intelligence Requirements

Properly articulated, mission-oriented requirements focus the intelligence effort and define IPRs. The commander, staff, and subordinate commanders play a role in developing the command's IRs. The intelligence officer formulates most of the initial requirements during IPB step 1 by identifying gaps in current intelligence holdings and by defining the scope and detail of production required for IPB support.

As IPB and staff planning progresses, analysts identify additional IRs, which are generally linked to proposed COAs, potential decisions, and targeting. Analysts working to satisfy the command and supported units' IRs also generate new IRs.

Based on the commander's intent and the current phase of the PDE&A cycle, the intelligence officer validates, refines, and prioritizes these additional requirements and converts them into integrated ICRs, IPRs, and IDRs. This is not a one-time effort, but instead a dynamic process of new, existing, and satisfied or no longer relevant requirements. The relative importance of each requirement changes as the PDE&A cycle progresses and as phases of the operation are executed. The intelligence officer must periodically confirm the assignment of priorities with the commander to ensure the intelligence effort is focused on the commander's desires.

Define and Prioritize Intelligence Production Requirements and Tasks

Once IRs have been clearly stated and properly defined, analysts define and prioritize IPRs and tasks by answering the following questions:

- What do I need and where can I obtain the information? The analysts must determine research needs and information sources. The tactical intelligence analyst may have access to a wide range of information and intelligence sources and documents. The product required may have been produced by another source or agency. This requirement may generate ICRs to provide the necessary information.

- When is the product required and in what form? Determination of production assets is based on time and final product requirements (e.g., document, report, supporting study, briefing).

- Who can produce the intelligence product? A small intelligence section does not have the assets to complete a large, detailed study in a short period of time.

- Who will get the product?

- Is this a product that can or must be shared with multinational allies? The intelligence product's classification and releasability must be considered.

- Does this product require supporting work? The analyst must determine the need for supporting requirements (e.g., imagery exploitation, topographic analysis).

Develop Intelligence Production Plan and Schedule

When dealing with large or complex IRs and IPRs, development of an intelligence production plan and a supporting schedule aids in effectively applying resources to accomplish the task. Production plans and schedules are particularly important at higher echelon commands and intelligence centers where numerous long-term projects are managed and coordinated. At lower echelons, production plans and schedules may consist of the intelligence officer conducting a quick mental assessment of the task and developing a time line for its completion.

Considerations

When developing a production plan and schedule, the first consideration is always priority. The requester's needs drive the due date. Once priority and time available are established, factors to be considered include—

- Research required.

- Time available to collect new information and data.

- Coordination needs.

- Review and quality control procedures.

- User's format requirements.

- Graphic preparation.

- Reproduction or conversion requirements.

- Dissemination requirements.

Preparation Methods

For large, long-term products, the production schedule is time lined with various milestones, due dates, and completion projections annotated. In large organizations with distinct collection, exploitation, editing, graphics, and dissemination assets, this time line synchronizes those assets to ensure efficient and timely project completion.

Plans and Tools

The principal planning vehicle for a MAGTF is tab B, (Intelligence Production Plan), to appendix 16 (Intelligence Operations Plan), to annex B (Intelligence), to an OPLAN or OPORD. Other tools that may be used by intelligence officers and their production leaders are the intelligence production matrix and the periodic intelligence production status report. Appendix E to this publication provides guidance and suggested formats for use of these plans and tools within a MAGTF. Specific instructions and formats are specified in unit SOPs.

Allocate Resources

The availability of the following organic and external resources required to produce the intelligence product must be determined:

- Intelligence production personnel.

- Time.

- Ongoing analysis.

- Preprocessed information sources.

- Collection assets.

- Automated information systems.

- CIS.

Assign Tasks

Specific tasks are assigned to the various collection and production resources that assist in the production process. The priority of tasks is

based on the priority of the IR, the time available, and the production schedule.

Prepare the Product(s)

During this step, existing information, data, and intelligence is researched and integrated with new information derived from collection operations and other all-source intelligence reporting. The resulting information set is analyzed and synthesized to develop conclusions and estimates. A final intelligence product(s) draft is produced based on the analysis performed.

Review and Quality Control

Procedures must be established for product review and quality control before final product approval and dissemination. A balance must be achieved between timely delivery and proper review.

Approve and Distribute the Product(s)

Responsibility for final approval of the intelligence product normally rests with the producing unit intelligence officer. At the MEF level, product approval responsibility is generally delegated to the ISC; however, time and the situation may dictate delegating this authority to lower levels. The intelligence product is only of value if it is distributed to the requester in time for proper use.

Follow Up

The final and most critical step in the production cycle is to follow up with commanders and other intelligence product users to—

- Ensure the product is understood.
- Determine whether PIRs and IRs are satisfied.
- Determine if the intelligence product generated new PIRs or IRs.

Production Management

Efficient management of the production cycle ensures effective military intelligence production in support of MAGTF and joint operations. Production management satisfies established PIRs and IRs in a complete, timely, and efficient manner; helps prioritize competing requirements to ensure timely response; and ensures the most effective use of limited intelligence resources.

Functions

Management of the production cycle encompasses the following functions:

- Determining the scope, content, and format of each product.
- Developing a plan and schedule for the development of each product.
- Assigning priorities among the various IPRs.
- Allocating processing, exploitation, and production resources.
- Integrating production efforts with collection and dissemination.

Production Managers

While intelligence production centers and agencies have separate production managers, management of the production cycle at other command levels is conducted by—

- Intelligence battalion commanding officer, serving as ISC under the staff cognizance of the MEF AC/S G-2, at the MEF CE level.
- Intelligence operations officer or air combat intelligence officer at the MSC level.
- Intelligence staff officer at lower tactical echelons.
- Officer in charge of an intelligence direct support team supporting a lower unit.

Production Management Elements

The following elements are essential for production management:

Production Requirements Development

Each IR must be validated through the chain of command and examined to determine scope, form, and content of the request. These validated and examined IRs are IPRs. A well-developed IPR includes—

● Point of contact and best way to communicate.

● Priority of the requirement.

● Date required and latest time the intelligence is of value.

● Classification, releasability, and format desired.

● Mission background.

● Brief description of the desired requirement.

● Justification for the requirement.

● Sources and documents previously consulted.

● Dissemination instructions (e.g., primary and alternate communications means or channels, designated recipients, quantities required).

Prioritization of Requirements

Production requirements are prioritized for limited intelligence resource use.

Asset Allocation

The intelligence officer and intel bn production manager consider internal or organic and external resources (e.g., JTF, theater, and national) for intelligence production tasking. Although internal resources should be considered first, production managers forward requirements for large, complex products to higher command levels. For example, IPB is an inherent function of staffs at every level; however, the production of detailed terrain analysis products may be more appropriately performed by the MEF intel bn or other supporting agencies.

Scheduling

Production managers must schedule and synchronize task elements in the time allotted to successfully complete intelligence production.

Integration with Collection and Dissemination

Production management starts in the planning and direction phase of the intelligence cycle where IRs are determined. The PIRs and IRs are either answered by intelligence products that are readily available or they become a collection or production requirement. Ultimately, products are disseminated to individuals and organizations that need them. Although collection, production, and dissemination involve their own unique internal procedures and cycles, they must be synchronized to provide a timely, pertinent, and usable intelligence product.

Intelligence Products

Intelligence products may be in graphic, written, or oral form and may be as simple as an answer to a question or as complex as a contingency intelligence study. Although they may be used to produce warnings or to identify opportunities, intelligence products are intended to facilitate planning and decisionmaking.

Graphics are the preferred product form because intelligence products should convey an accurate image of the battlespace or threat to the decisionmaker in a form that facilitates rapid understanding. The use of automated information systems is increasing the capability to develop graphic products that can be disseminated and displayed over web-based systems. Graphics developed by the MEF P&A cell may be pulled via the MAGTF tactical data network from the MEF SIPRNET web site or shared via IAS. Use of these graphics reduces or eliminates MSC production.

In time-sensitive situations, the verbal report or short text message may be the most expeditious and useful intelligence product form. For more complex or precise planning needs, graphics reinforced with detailed supporting text is usually required.

Whether oral, text, or graphic, intelligence products should use standard formats. Baseline formats may be modified to suit unit needs, but format modifications may impact interoperability so they must be thoroughly coordinated with all users. The following intelligence products are the principal intelligence products developed and used in the MAGTF.

MAGTF Contingency Intelligence Study

This baseline intelligence study is prepared in advance for standing OPLANs and likely contingencies. In written form, this study is based on the intelligence estimate format and can be converted to an intelligence estimate when a contingency becomes a reality. Many of the products created in steps 1 through 4 of the IPB process (e.g., MCOO, weather effects charts, threat models, doctrinal templates) can be prepared either as supporting graphics or as stand-alone products.

Intelligence Estimate and Supporting Studies

The intelligence estimate provides basic and current intelligence and mission-specific IPB results. Normally prepared by echelons of battalion or squadron size and larger during the planning phase, estimates are frequently disseminated to other units to keep them current on intelligence. Supporting studies may cover particular aspects of the enemy situation or the AO. See appendix A for the intelligence estimate format and discussion of the relationship between IPB and the intelligence estimate.

Target or Objective Study

This intelligence product provides mission-specific intelligence in support of small unit execution. There is one basic form, but many variations can be used. The study is used to support attack aviation as well as MEU(SOC) and regular combat operations. See chapter 8 for a discussion of the basic target or objective study.

Intelligence Summary

The intelligence summary (INTSUM) provides a synopsis of the intelligence situation covering a specified period prescribed by the unit intelligence SOP or annex B (Intelligence) to the OPORD. Used to report threat activities, threat capabilities changes, and P&A results, the summary is designed to update original and subsequent intelligence estimates.

At lower tactical echelons, INTSUMs are prepared according to the unit SOP or annex B to the OPORD. At higher commands, a daily INTSUM (DISUM) is published every 24 hours. Using the basic format, units tailor the INTSUM to fit the situation. Automated information systems facilitate graphic production of INTSUMs and DISUMs, which are posted on networks with links to detailed supporting intelligence products, reports, and data bases. See appendix F for the INTSUM format.

Intelligence Report

The intelligence report (INTREP) is a standardized report that is disseminated as rapidly as possible based on its importance to the current situation. This report is the primary means for transmitting new and significant information and intelligence when facts influencing threat capabilities have been observed or when a change in threat capabilities has taken place. Generally, a separate report is prepared for a single item of information by the first intelligence element acquiring the information. When time permits, the INTREP should include the

originator's interpretation of the information or intelligence being reported. See appendix G for the INTREP format.

Briefings

Intelligence briefings should always convey mission-essential intelligence and other pertinent information tailored to the audience and current IRs. Intelligence personnel must be able to prepare and orally convey relevant intelligence in a clear, concise manner to brief commanders, staffs, and subordinate units.

Briefings should be supported with graphics to enhance understanding in the least amount of time. Graphics may be as simple as a sketch or acetate overlay or as complex as a multimedia presentation delivered via video teleconferencing. Intelligence personnel must ensure graphics are clear, legible, simple, visible, and focused on relevant information.

At lower tactical levels, briefings are generally informal and often called on short notice. At higher levels, briefings may be structured and scheduled on a recurring basis. The intelligence brief is usually part of a staff briefing coordinated by the chief of staff, executive officer, or the operations officer. Intelligence briefings can be in the form of an information, decision, or confirmation brief.

Information Brief

This is the most common form of brief intended to enhance situational awareness and understanding. The commander's morning update is an example of an information brief. See appendix H.

Decision Brief

The second type of brief is for the purpose of obtaining a decision from the commander. A briefing conducted to convey wargaming results and to gain the commander's preferred COA is an example of a decision brief.

Confirmation Brief

This brief is a final review of a planned action to ensure participants are certain of the objectives and are synchronized with each other.

Organic MAGTF Intelligence Production

In the MAGTF, deliberate production of detailed, all-source intelligence products supports planning. While deliberate production draws heavily on external national, theater, and Service-level production sources, organic MAGTF intelligence sections tailor products to the MAGTF mission and needs. Small unit intelligence sections, intelligence watches at the regiment or Marine aircraft group and battalion or squadron levels, and intelligence direct support teams conduct primarily immediate production.

Unit Intelligence Sections

The MAGTF CE and MSC intelligence sections primarily conduct deliberate production to satisfy planning requirements. They produce the contingency intelligence studies that lower-level commands tailor to their needs.

Units conduct IPB and prepare estimates and target or objective studies that are tailored and focused on their mission and level of command. The IRs that are beyond a unit's production capability are normally forwarded via the chain of command to the MEF G-2 or intel bn. A well-prepared IPB is the basis for rapid and effective immediate intelligence production.

Small unit intelligence sections (e.g., regiment or battalion and Marine aircraft group or squadron) primarily conduct immediate production to satisfy tactical decisionmaking and operations. Immediate production conducted at higher echelons focuses on alarms or triggers associated with the commander's decision points or reactive targeting against identified HPTs. As units

and sensors collect data related to NAIs, TAIs, decision points, and HPTs, this information is rapidly assessed, placed in context, and disseminated as intelligence to the commander and appropriate agencies for immediate action. Often the product is a verbal report or short INTREP sent via electronic means.

Intelligence Direct Support Teams

Two direct support teams are organic to the P&A company, intel bn, and one each for the division, MAW, and FSSG headquarters. They are designed to allow the MEF or MSC commander and their G-2s to focus intelligence support to designated subordinate units. These teams tailor higher and external intelligence products to the needs of the supported unit and assist the supported unit in the production of IPB and other intelligence products to support detailed mission planning and execution.

Production and Analysis Company, Intelligence Battalion

The P&A company produces and disseminates all-source fused tactical intelligence, IMINT, and GEOINT products in support of the MAGTF, MSCs, and other commands as directed. As the focus of the deliberate production effort, P&A company satisfies IPRs for the entire MAGTF. The P&A company has the personnel and equipment resources and CIS connectivity to national, theater, and Service-level organizations' intelligence products and production resources for augmenting organic capabilities. See chapter 9 for additional information.

External Production Support

Marine Corps intelligence assets are optimized for the production of tactical intelligence in support of MAGTF operations. While organic assets are generally sufficient to meet MAGTF requirements, national, theater, and Service intelligence agencies and centers provide unique intelligence production capabilities. The MAGTF has the ability to exploit external intelligence assets to enhance its organic capabilities. The following key external capabilities are employed to support MAGTF operations:

- National, theater, and Service-level intelligence P&A.
- Geospatial information and services.
- P&A of target intelligence and target materials.
- National imagery collection, exploitation, and production.
- Collection and production support from the U.S. SIGINT System.
- National and theater-level CI and HUMINT collection and production.
- Liaison elements from national and theater intelligence agencies.

To exploit external intelligence support resources, the MAGTF must have—

- Trained personnel experienced with external intelligence assets.
- Sufficient, reliable, CIS connectivity and interoperability with national, theater, and Service intelligence architectures to receive, process, and disseminate information.
- Integration of Marine intelligence specialists into national, theater, and Service intelligence organizations to articulate Marine Corps capabilities and requirements, to influence decisions, and to optimize intelligence support to expeditionary forces.
- Established liaison between the MAGTF and supporting intelligence agencies through dedicated communications and exchange of officers.

Department of Defense Support

Within the Department of Defense (DOD) intelligence production community, the DOD Intelligence Production Program (DODIPP) provides the analytical and production resources to support

operational forces. The DODIPP incorporates basic principles that minimize duplication of effort and make the specialized expertise of its analytical personnel available to support DOD customers. The DOD intelligence production community is comprised of the following agencies, centers, and activities:

- DIA.
- Service production centers (e.g., MCIA).
- Unified command JICs or joint analysis centers, components, and Reserves.
- Allied production activities participating in the shared production program (SPP) or during crisis surge situations.
- National Security Agency, which produces SIGINT.
- National Imagery and Mapping Agency, which produces geospatial information and GEOINT.

National Production Support

The DIA and its supporting agencies (Armed Forces Medical Intelligence Center and Missile and Space Intelligence Center) are responsible for intelligence production in the following areas:

- Foreign national military policy, doctrine, strategy, and planning, including—
  - National military leadership.
  - Mobilization process and potential.
  - Strategic or large scale military operations.
  - Integrated, combined, or joint forces on military net assessments and assessments or estimates focusing on military issues at the national, regional, and global levels.
- Current indications and warning intelligence and strategic targeting and planning by the joint staff.
- Integrated force trends and projection assessments.
- Nuclear weapon programs and doctrine.

- Intelligence on proliferation and technology transfer.
- Technological capabilities of antitank guided missiles, surface-to-air missiles, short-range ballistic missiles, and antiballistic and antitactical ballistic missiles.
- Medical and biological warfare intelligence.
- Global topics, such as military geography, industrial resources, transportation systems, demographics, military industrial and resource bases, and military economics.
- Intelligence production programs on counterterrorism, counterdrug intelligence support to law enforcement agencies, foreign intelligence and security forces, and deception analysis.
- Intelligence programs fulfilling DOD-wide responsibilities of common concern, such as targeting and foreign materiel.
- OOBs and associated facilities and installations assigned under the SPP, to include assessing the general military capabilities of those forces.

Unified Command Production Support

A unified command's intelligence production is performed by a production center or JIC, which is assigned to the unified command in support of theater or specialized forces. The JICs fulfill intelligence requirements of unified command CINCs and subordinate commanders by providing tailored, finished intelligence products to support theater mission planning and execution. Regional and functional unified command JICs' production responsibilities vary.

Centers

Unified command intelligence production JICs include—

- U.S. Joint Forces Command's Joint Forces Intelligence Command.
- U.S. Central Command's JIC.

- U.S. European Command's Joint Analysis Center (JAC).
- U.S. Pacific Command's JIC.
- U.S. Special Operations Command's JIC.
- U.S. Southern Command's JIC.
- U.S. Space Command's Combined Intelligence Center.
- U.S. Strategic Command's JIC.
- U.S. Transportation Command's JIC.

Responsibilities

The JICs' intelligence production responsibilities include—

- Operational intelligence, current intelligence, and indications and warning for forces deployed within the command's area of responsibility.
- OOBs and associated facilities and installations assigned under the SPP, to include assessing the general military capabilities of those forces.
- Foreign military forces unit-level training and/or operational readiness.
- Physical environment of deployed or committed forces, including terrain analysis and IPB.
- Targeting support, including target materials, bomb damage assessments, tactical BDAs, and special operations forces targeting support.
- Support to command-sponsored joint planning and exercises.
- Tailored and focused intelligence produced elsewhere to meet the specific requirements of command customers.
- Background and tactical intelligence to customers within the theater, including operational and allied forces.

Services Production Support

The Service production centers are responsible for Service-specific intelligence production and for production relative to U.S. Military Forces assigned for the SPP.

Centers

The Service production centers are—

- Army—National Ground Intelligence Center (NGIC).
- Navy—National Maritime Intelligence Center (NMIC).
- Marine Corps—Marine Corps Intelligence Activity (MCIA).
- Air Force—National Air Intelligence Center (NAIC).

Responsibilities

The centers' intelligence production responsibilities include—

- Weapon system technical data, characteristics, performance, system vulnerabilities, and capabilities to support Service and defense acquisition activities and force developers and to support Service operational training and preparation for contingencies or conflicts.
- Basic ground, naval, and aerospace intelligence and foreign intentions and capabilities.
- Service-unique doctrine, force structure, force modernization, training and education, and acquisition.
- Support to Service schools and commands relative to training, exercises, predeployment, or crisis responsibilities or activities.
- OOB and associated facilities and installations assigned under the SPP, to include assessing the general military capabilities of Services.

Service-Unique Responsibilities

The following Service production centers have unique intelligence production responsibilities:

- NGIC produces ground-related systems and develops intelligence on—
  - Armor.
  - Infantry.
  - Field artillery.
  - Air defense guns.
  - Landmines.
  - Chemical warfare.
  - Helicopters.
  - Munitions.
  - Engineering and transport or logistic equipment.
  - Associated technologies.
- NMIC, Office of Naval Intelligence, produces naval-related systems and develops intelligence on—
  - Surface and subsurface combatants.
  - Antisubmarine or surface auxiliary and support naval ships and programs.
  - Weapons, merchant shipping, and ocean science information.
  - Associated technologies.
- NAIC produces aerospace-related systems and develops intelligence on—
  - Intercontinental ballistic missiles.
  - Intermediate-range ballistic missiles.
  - Medium-range ballistic missiles.
  - Bombers.
  - Fighters.
  - Special mission aircraft.
  - Munitions.
  - Space launch systems and satellites.
  - Associated technologies.
- MCIA produces amphibious and expeditionary warfare intelligence on—
  - Shallow water mines.
  - Coastal artillery.
  - Foreign marine and naval infantry forces.
  - Antilanding capabilities.
  - Expeditionary studies.

Non-Department of Defense Intelligence Production Support

Intelligence production in support of military forces is available from agencies outside DOD (e.g., Central Intelligence Agency). Generally, DIA serves as the focal point for tasking these agencies; however, theater and JTF intelligence staffs can access support through their national agency's liaison office or an assigned national intelligence support team (NIST).

A NIST is a nationally sourced, task-organized team composed of intelligence and communications experts from DIA, Central Intelligence Agency, National Security Agency, NIMA, or any combination of these. A NIST provides the supported command with increased IR management, production and dissemination capabilities, and a direct conduit to national agencies. The size and composition of the NIST varies according to the size and nature of the crisis and the mission and intelligence needs of the supported command.

Production Support Requests

A PR begins as an IR levied on the unit intelligence section. Before requesting production support, the unit intelligence officer must determine if the—

- Intelligence request or request for intelligence (RFI) is most appropriately answered by intelligence resources.
- Information or intelligence is already available in unit intelligence files, data bases, or information resources.
- Intelligence can be obtained by organic collection assets and developed into intelligence by its production assets.
- Intelligence request can be answered from other unit or component intelligence elements.

Once the unit intelligence officer determines that the requirement cannot be met with local resources, the requirement is forwarded up the chain of command for satisfaction. The intelligence officer determines whether to submit the requirement as RFIs, ICRs, IPRs, or PRs. (The acronym IPR is currently unique to the Marine Corps, while the acronym PR, established in joint doctrine, is chiefly applicable to intelligence operations at the MEF CE level and above.)

Generally, an RFI is submitted if the requirement is a fairly straightforward question. In a noncombatant evacuation operation, a RFI may be, "How many personnel require evacuation?" In this case, no extensive collection or production is required because the intelligence is generally available.

A PR is more appropriate when the IR is complex or substantial, for example, "What is the capability of country X to defend its coastline against an amphibious assault?" This requirement may result in an IPR for the MEF CE or a PR to the JTF headquarters because the answer will require the collection and analysis of a large amount of information ranging from hydrographic conditions to available threat weapon systems. Such analysis may be beyond the capabilities of a small unit intelligence section and more appropriately performed at the theater or Service level where access to information and ability to task collection resources are greater.

A PR is also appropriate to satisfy a requirement that may be recurring in nature or in a denied area, for example, "How many aircraft are maintained on alert status at airfield Y?" The unit intelligence officer submits a request for theater and national production assets, because the airfield will need to be monitored for a period of time to determine the answer and the requesting unit probably does not have the collection resources to monitor the airfield.

As an RFI travels up the chain of command, it is satisfied (from available information or intelli-

gence or by collecting new data), converted into a PR, or forwarded to the next higher level for satisfaction. Each unit in the chain of command validates the PR and either satisfies it from within or passes the requirement to the next higher authority for action. Figure 9-1 illustrates the generic flow of PRs.
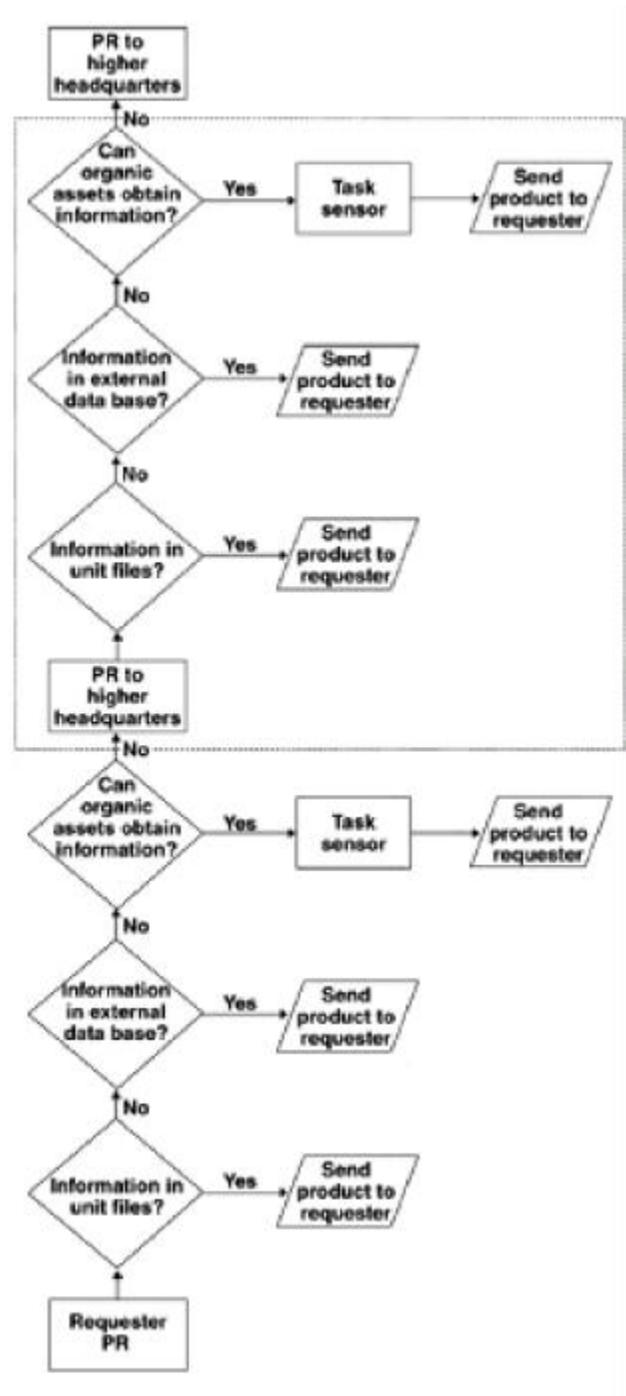
Figure 9-1. IPR Flow.

Request Process

Most IPRs are levied on the intel bn, P&A company's P&A cell, which is the MAGTF's principal deliberate production asset. Based on the commander's guidance and the G-2/S-2's direction, the intel bn commander or ISC—

● Plans, manages, and conducts MAGTF IPR management.

● Exercises staff cognizance over MEF collection and production elements to fulfill PRs.

● Determines which PRs are produced locally and which PRs are forwarded to the appropriate theater, Service, or national DODIPP production center validation office (VO).

The VO reviews the PR, determining whether to accept and satisfy the PR, forward the PR to another production center, or invalidate the PR. The combatant commander, the JFC, or the MAGTF commander directs PR and RFI procedures, which vary from theater to theater. For example, a MAGTF preparing to deploy submits PRs through the normal Service chain of command to the MCIA VO. However, a MAGTF operationally assigned to a combatant commander submits PRs through the established operational chain of command to the VO supporting that theater. A theater intelligence directorate (J-2) may delegate validation authority to a JTF J-2 during a crisis, providing the JTF J-2 a streamlined path for JIC production support and priority over other non-crisis production requirements. For most crises and contingencies, annex B to the joint force commander's OPLAN or OPORD specifies policies and procedures for requesting intelligence production support.

Request Format

The same basic format is generally used for RFIs and PRs. This facilitates conversion of an RFI into a PR at a later time. A basic level production request must include—

● Organization(s) and specific office(s) or individual(s) requesting the product.

● Statement describing the—
  ■ Required information and intelligence.
  ■ Sources consulted by the requester and source shortcomings relative to the request.

● Latest time information of value.

● Product form (e.g., hard copy text, electronic file on disk) and total quantity of each.

● Requirements prioritization for multiple elements.

The basic format provided above is sufficient at lower tactical levels; however, at higher levels the format becomes more structured. Defense Intelligence Management Document 0000-151C-95, *Department of Defense Intelligence Production Program (DODIPP): Production Procedures (U),* stipulates the format for PRs, which ultimately will be forwarded to a DODIPP VO and production center. See appendix I for PR format. Each combatant command defines formats and procedures in their applicable intelligence TTP documents. The MEF CE and MSC headquarters SOPs defines formats for their headquarters subordinate elements.

Automated Production Request Procedures

Community On-line Intelligence System for End Users and Managers (COLISEUM) provides an automated capability for the preparation, submission, validation, and assignment of PRs within the DOD intelligence production community. With this system, the requester researches existing requirements and responses to reduce the submission of duplicate requirements. Commands and production centers with access to COLISEUM have immediate visibility of existing and new requirements validation and production status and product completion notification.

Designed to function as an application under the Joint Deployable Intelligence Support System (JDISS) program, COLISEUM is currently available on JDISS 1.01 and JDISS 2.0. The IAS also provides access through JDISS. In addition, the COLISEUM is available on INTELINK sensitive compartmented information (SCI) under

DIA, Directorate of Intelligence Production. The principal inject sites for Marine Corps operating forces PRs are the MEF and Marine Corps forces (MARFOR) G-2s. The MEF, MARFOR, CINC, and DOD policy documents govern procedures for submitting PRs via COLISEUM.

CHAPTER 10. OPERATIONS

Intelligence enables the planning and execution of successful operations. Unity of effort, high tempo, timely decisionmaking, rapid execution, and the relentless exploitation of decisive opportunities characterize MAGTF operations. Intelligence P&A must have the flexibility, agility, and sustainability to support MAGTF operations. This chapter discusses intelligence P&A planning and execution considerations for various MAGTF operations and phases.

Expeditionary in nature, MAGTF operations are conducted according to the following Marine Corps maneuver warfare and emerging operational concepts, which present unique challenges and considerations for intelligence support:

- Operational Maneuver From The Sea—The maneuver of operational-level naval forces projects sea-based power ashore to deal a decisive blow at a place and time of our choosing. Operational maneuver from the sea (OMFTS) focuses on operational objectives and embodies the application of the principles of maneuver warfare to a maritime campaign.

- Sustained Operations Ashore—Those campaigns in which MAGTFs fight as sea-based operational maneuver elements. Embracing the tenets of OMFTS, sustained operations ashore (SOA) envisions a series of operational-level missions designed to enhance the joint force campaign and exploit weaknesses exposed in the opposing force. Normally, SOA involve a MEF assigned to a larger joint or combined force.

- Military Operations Other Than War—The conduct of Marine and naval expeditionary operations across the range of military operations short of war. MOOTW encompass a wide variety of activities intended to deter war, resolve conflict, promote peace, and support civil authorities.

SECTION I. OPERATIONAL MANEUVER FROM THE SEA

Success in OMFTS depends on the ability to seize fleeting opportunities and quickly take advantage of enemy vulnerabilities. Emphasis is placed on deception, surprise, speed, and battlespace preparation to create delay, uncertainty, and ineffectiveness in enemy actions. Intelligence provides the knowledge and understanding that enables the effective conduct of OMFTS. Operational maneuver from the sea relies on intelligence to drive planning, COA development, wargaming and selection, and execution by—

- Identifying the enemy's COG(s), strengths, and weaknesses.

- Exposing critical vulnerabilities to be exploited by naval forces operating from the sea.

- Assessing the potential for maneuver offered by the battlespace, to include identifying entry points where the force can establish ashore.

- Providing the foundation for effective force protection and C2W efforts, which facilitate the preservation of surprise and the employment of deception to disrupt and disorient the enemy during OMFTS.

Requirements

Key OMFTS intelligence P&A support requirements include—

- IPB and situation development covering a broad air, sea, and land maneuver space.

- Threat analysis focused on determining COGs and critical vulnerabilities.

- Detailed terrain and hydrographic analysis, which identify suitable entry points and support maneuver of widely dispersed combat and CSS elements.

- Responsive processing, analysis, and production capabilities that can rapidly develop the critical intelligence required to shape operational and tactical decisionmaking and to provide the intelligence segment of the common operational or tactical picture.

- Indepth intelligence support of force protection and C2W activities.

- Detailed information regarding local resources (e.g., petroleum, oils, lubricants, water) to reduce MAGTF ashore sustainment requirements.

Considerations

Although the requirements appear similar to the traditional amphibious operations intelligence support requirements, OMFTS presents the following unique considerations:

- The large potential AO may extend 200 nautical miles or more from the sea base.

- Points of entry may be widely dispersed instead of being grouped into a single force beachhead.

- The sea space becomes a maneuver area for LCACs and advanced amphibious assault vehicles transiting to the shore from over the horizon, requiring extensive and detailed hydrographic analysis over a larger area.

- The OMFTS forces rely on rapid maneuver for maximum effectiveness and survivability, necessitating detailed and accurate terrain analysis.

- The vision of dynamic, precision fires at maximum engagement ranges requires precise targeting data and BDA.

- Analysis must occur in real or near-real time and must be available simultaneously to every MAGTF unit and element.

- Intelligence products must be in a format that can be rapidly updated and displayed in graphic form on automated information systems to be used by units, staffs, and decisionmakers.

Support During Planning

Initial production efforts are directed at providing an extensive description of the battlespace and threat required to focus the planning effort. Under the direction of senior Navy and Marine intelligence officers, the MAGTF, MSC, naval expeditionary force, amphibious staff, and ship's intelligence sections engage in a collaborative effort to plan and execute intelligence and reconnaissance operations necessary to support development of intelligence products that support the force.

Individual intelligence sections normally concentrate on their particular areas of expertise, satisfying their units' requirements while contributing a broad-scope product to the general production effort. The MAGTF G-2 CIC or P&A cell may focus on describing the battlespace and enemy C2, logistics, and reserves; while the ground combat element's intelligence section studies the enemy ground forces. The amphibious force and the aviation combat element's intelligence sections both look at air and air defense threats, and the amphibious task force (ATF) intelligence staffs concentrate on the naval, sea mine, and coastal defense threat.

Intelligence personnel access national, theater, and adjacent component resources via reach back to augment organic resources of the force. The integrated Navy and Marine amphibious force intelligence center provides a comprehensive IPB analysis, intelligence estimate, HVT list, and supporting intelligence studies by coordinating amphibious force efforts. As the

planning phase continues, production efforts are concentrated on identifying enemy vulnerabilities to be exploited, providing IPB products, HPTs, and intelligence estimates to support specific COAs under consideration.

In the final stages of the planning process, the production effort shifts to development of mission-specific intelligence products focused on the selected COA(s). These products include IPB graphics, point of entry studies, and target or objective studies. In addition, an extensive all-source intelligence effort supports deception, operations security, psychological operations, and electronic warfare planning according to the commander's information operations or C2W strategy. The production effort becomes increasingly decentralized as MSC and subordinate element intelligence sections focus on their units' specific requirements. The MAGTF CE intelligence section continues to provide products to support the entire force, concentrating on elements designated as the main effort.

Support During Execution

During the execution phase, emphasis is placed on rapid processing and production of intelligence that supports timely decisionmaking, enhanced situational awareness, and engagement of HPTs. Because OMFTS depends on decisive action and operational tempo to break the enemy's cohesion and ability to resist, intelligence personnel must be able to—

● Demonstrate flexibility, agility, and responsiveness to recognize threat vulnerabilities and identify opportunities as they develop during battle.

● Demonstrate an awareness of ongoing operational and tactical activities and potential threat actions or reactions.

● Integrate rapidly all-source intelligence information with sensor data and combat reporting to develop a coherent, timely, and tailored picture of enemy dispositions and an assessment of its intentions and capabilities.

● Convey rapidly the developed picture and assessment to commanders in time to exploit identified opportunities.

● Engage fully in planning for future operations by continuing IPB analysis, delivering BDA results, satisfying new intelligence requirements, and participating in the decisionmaking process.

SECTION II. SUSTAINED OPERATIONS ASHORE

Sustained operations ashore require broad-based intelligence support that bridges the operational and tactical levels. Tactical plans are based on operational-level intelligence assessments, which identify the enemy's COG(s) and critical vulnerabilities across the entire theater.

In SOA, MAGTF intelligence operations contribute to the operational level assessments while translating the conclusions from those assessments into relevant tactical intelligence.

While OMFTS focuses on operations from a sea base, SOA entails large-scale, potentially long-term, land operations supported from the sea. Critical aspects of SOA include a large AO and rapid operational tempo. While P&A in OMFTS is heavily tasked with identifying points of entry, SOA focus on infrastructure related to sustaining a large force. Analysis of threat COGs and vulnerabilities, detailed terrain studies, precise targeting data, and BDA remain requirements under SOA.

Considerations

Considerations for the development of intelligence in support of SOA are similar to those for OMFTS. Intelligence support during the execution of SOA requires the same agility and responsiveness as in OMFTS, with the focus on providing critical intelligence to support tactical decisionmaking. However, SOA are normally conducted over a greater area and with a larger size force than in OMFTS, creating the requirement for a larger and more widely distributed intelligence operation support structure. The potential for integration with theater, allied, and other Service intelligence assets are also greater than in OMFTS.

Support During Planning

P&A efforts in support of SOA parallel those for OMFTS. Initial production is broad in scope, with the focus narrowing as particular COAs are selected and a concept of operations is developed. In SOA, GEOINT production takes on added importance; opportunities for ground and air maneuver as well as LOS profiles for observation, weapons employment, and communications-electronic equipment operations are major considerations. Mapping enhancements, LOC studies, and IPB graphics

(e.g., cross-country mobility, weather effects, and COOs) are key products.

Threat analysis must be comprehensive and generally deals with large ground and air formations. This analysis covers reserves as well as committed forces and must take into account factors that impact the enemy's ability to fight at the operational and tactical levels (e.g., leadership, doctrine, training, readiness, and sustainability).

An extensive production effort is devoted to supporting logistic operations. The main components of this effort are studies of the local climate, infrastructure, and resources as well as the rear area threat. Products from national, theater, and joint force intelligence agencies contribute to the production effort, but many of these products will be tailored by the intel bn's P&A company, other intelligence producers, and the MSCs' intelligence sections to satisfy particular MAGTF requirements.

Support During Execution

During execution, emphasis is placed on rapid processing and production of tactical intelligence to support operational decisionmaking in the current battle, while at the same time providing detailed intelligence to shape plans for future operations.

SECTION III. MILITARY OPERATIONS OTHER THAN WAR

Military operations other than war include the following missions and tasks, which present unique intelligence requirements:

- Humanitarian assistance and disaster relief.
- Noncombatant evacuation operations.
- Maritime intercept operations.

- Show of force.
- Strikes and raids.
- Peace operations, including peace enforcement and peacekeeping.
- Support to counternarcotics operations.
- Recovery operations.

Requirements

Intelligence shapes operations during MOOTW as it does during other types of MAGTF operations. However, in addition to understanding the physical environment and the threat, the commander must have intelligence on political, economic, and sociological conditions to develop sound military plans that will accomplish the assigned mission. To support MOOTW, MAGTF intelligence personnel must be able to—

- Focus on areas with the greatest potential for the execution of contingency operations.
- Respond with minimal warning and preparation.
- Adapt to a wide variety of potential missions and possess expertise and specialized capabilities to provide MOOTW intelligence.

Considerations

Intelligence P&A activities in MOOTW are generally characterized by—

- The initial lack of detailed data bases on the AO and threat forces.
- An extensive list of nonstandard intelligence requirements that must be satisfied to support planning and execution (e.g., uncertain force protection requirements).
- Analysis of nonmilitary related data.
- A rapidly changing situation resulting from crisis conditions in the AO.
- Compressed timeframe for intelligence development.
- Restrictions on collection operations and the dissemination of intelligence, particularly with multinational military forces, NGOs, and PVOs.
- Increased likelihood of participation by coalition partners.

Support During Planning

Intelligence P&A requirements in MOOTW are normally focused on nontraditional subject areas and IRs. For example, more detailed knowledge of the host nation's economic, transportation, medical, and public works infrastructure will be required to develop plans for humanitarian assistance operations. A threat study to support a peacekeeping mission must encompass an extensive treatment of political, cultural, and sociological factors related to various insurgent or paramilitary factions in addition to the conventional military capabilities of the opposing sides.

Collaboration and coordination with area specialists and expertise from external intelligence organizations, non-DOD agencies (e.g., State Department, Office of Foreign Disaster Assistance, U.S. Agency for International Development) and NGOs or PVOs are crucial to satisfying MOOTW requirements. In turn, the requirement to share information and intelligence with those same agencies, as well as host-nation and allied forces, has a significant impact on analysis, production, and dissemination. While the goal is to provide necessary information and intelligence to participants in the operation, some information must remain releasable only to U.S. forces or allies with long-standing intelligence exchange agreements.

Production formats generally must be adapted to the requirements of a particular situation (e.g., normal IPB products must be modified to highlight factors critical to the specific MOOTW mission). In addition, P&A in MOOTW must be responsive to the unique needs of a large number of small elements conducting independent activities throughout the AO. Production in support of these elements must be tailored to specific mission requirements and provide details pertinent to the small unit level. Intelligence that increases the situational awareness of individual Marines (e.g., information on local customs,

language, health and sanitation) is an important part of this effort.

MOOTW IPB Requirements

The principal difference between IPB for conventional war and MOOTW activities is the focus and the degree of detail required to support the commander's decisionmaking process. Another major difference is the enormous demand for demographic analysis, since the population often is the focus in MOOTW. Typically force protection IRs take on greater priority. The four steps of the IPB process and sample aspects and considerations for various MOOTW activities, are discussed below. (See FM 34-130/FMFRP 3-23.2 for a discussion of each type of operation.)

Define the Battlespace Environment

Intelligence personnel define the MOOTW battlespace environment by expanding the AOI, assembling data on terrain and infrastructure, and compiling data on the host nation.

Expand the AOI

To expand the MOOTW AOI, intelligence personnel must—

- Identify potential sources of assistance to friendly force operations from outside the country or AO.

- Identify military, paramilitary, governmental, nongovernmental, and private volunteer organizations that may interact with the friendly force.

- Identify and locate external influences on the operation.

- Consider media, political, and third nation support or interference.

- Identify the geographic boundaries of the operation, applicable legal mandates or terms of reference, and other limitations or constraints that may impact on the operation.

Assemble Data on Terrain and Infrastructure

To assemble data on MOOTW terrain and infrastructure, analysts must—

- Identify existing infrastructures that have the potential for use by either threat or friendly forces in the operational area.

- Include sources of basic sustenance and energy, as well as transportation and communication networks.

- Identify facilities in adjacent or intermediate countries that could support the introduction of friendly forces or the delivery of necessary materials.

- Compile data on the geography and climate of the area, to include unusual or violent weather patterns or natural disturbances.

Assemble Data on the Host Nation

To assemble data on a MOOTW host nation, intelligence personnel must—

- Identify the existing government and military infrastructure.

- Pay particular attention to their capabilities and limitations with regard to support for or interference in the operation.

- Begin compiling demographic data on the population, to include age, education, religious beliefs, cultural distinctions, ethnic makeup, allocation of wealth, political affiliations and grievances, languages, values, and practices.

Describe the Battlespace Effects

Intelligence personnel describe MOOTW battlespace effects by identifying legal aspects, conducting terrain and weather analysis, evaluating the threat, and determining threat COAs.

Identify Legal Aspects

The MAGTF staff judge advocate should fully explain the impact of legal mandates, terms of references, or other diplomatic agreements. Intelligence personnel should include legal mandates in place that will have a major effect on friendly COAs, particularly rules of engagement and use of force.

Conduct Terrain Analysis

To conduct terrain analysis for MOOTW, intelligence personnel must—

- Use military aspects of terrain or KOCOA.
- Pay attention to routes and areas that offer good observation for friendly security forces.
- Depict potential obstacles, choke points, and ambush sites.
- Ensure that air and ground AAs are included.
- Include analysis of the urban terrain.

Conduct Weather Analysis

To conduct a standard weather analysis for the MOOTW AO, intelligence personnel must consider the effects of weather on—

- Displaced persons or refugees.
- Hostile groups.
- Trafficability.
- Air operations.
- Seaborne operations.
- Night operations.
- Communications.
- Threat tactics and civil disturbances (e.g., rallies and demonstrations).

Evaluate the Threat

Doctrinal templates for typical types of threats faced in the MOOTW environment are rare because there are many threats. Intelligence personnel must evaluate the threat according to the specific mission.

Weather

In missions involving humanitarian assistance and disaster relief, where the environment is the threat, intelligence personnel should—

- Evaluate the environmental impact on the population and friendly operations by determining, for example, if continued rains and flooding could trigger mudslides isolating portions of the population and inhibiting relief operations.
- Prepare climatic studies showing historical paths and frequencies of destructive weather (e.g., hurricanes or typhoons), which can serve as a sort of doctrinal template to determine if earthquake aftershocks could collapse fragile water and sewage treatment facilities leading to an increase in waterborne diseases and environmental hazards.

Competing Factions

In missions involving competing factions, some critical information and intelligence may exist in coalition, host nation, or U.S. data bases, which could be used to begin building a threat model for the operation. Intelligence personnel should recognize differences in threats, strategy, procedures and tactics, as well as weapons, equipment, material, and personnel.

Environment

When evaluating the threat, intelligence personnel must—

- Determine if the environment is permissive, uncertain, or hostile to U.S. forces entering with or without host nation approval.
- Determine if the population supports U.S. forces and if that support is contingent on some type or form of material compensation from U.S. forces (e.g., food, water, shelter, weapons).
- Determine if the population is organized to oppose U.S. forces and if the people are

armed and at what level (e.g., weapons, mines, vehicles).

- Identify dissident groups among the population that may publicly support but clandestinely oppose U.S. forces.

- Identify which terrorist groups are present, thought to be present, or have access to the AO, and if they are supported or directed.

- Identify leaders, trainers, and key staff members and develop psychological profiles on key personnel.

Determine Threat Courses of Action

This step in the IPB process is the culmination of battlespace environment analysis and threat evaluation. The success of U.S. operations in MOOTW depends on the combined efforts of state department officials, numerous government agencies, a unified command and its component Services, special operations forces, and the National Security Council. These organizations work together to accomplish foreign policy objectives of the United States and foreign allies. To determine threat COAs, intelligence personnel must—

- Template or describe the actions of the threat that would interfere with friendly operations (e.g., in peacekeeping operations any violations of the existing legal mandates by either belligerent could adversely effect friendly operations and security).

- Develop COA models depicting the reactions of the threat to friendly operations within the AO and AOI.

- War game each COA.

- Analyze reactions of local populace, multinational partners, NGOs, PVOs, and other key third or neutral parties to friendly COAs.

- War game terrorist and sabotage actions and other activities where the threat could reasonably avoid claiming responsibility, which could jeopardize friendly operations or security.

MOOTW IPB Products

The IPB products that may be useful in the MOOTW environment include (but are not limited to) population status, logistics sustainability, LOC, and key facilities and target overlays, as well as coordinates registers and pattern analysis plot sheets.

Population Status Overlay

To construct a population status overlay encompassing areas in the operation, intelligence personnel should, at a minimum, depict the population by political affinity or regional majority sentiment (e.g., progovernment, anti-American, neutral). If unable to ascertain some root causes of regional unrest (e.g., religious, ethnic, racial, or economic differences), intelligence personnel may display the population in terms of demographic differences. Points where demographic differences intersect often pose the greatest potential for conflict and possible disruption of friendly operations. See figure 10-1.

Logistics Sustainability Overlay

To construct a MOOTW logistics sustainability overlay, intelligence personnel should identify sources of food, potable water, fuel, etc. that could be used by the population, threat, or friendly forces. See figure 10-2.

Lines of Communications Overlay

To construct a MOOTW LOC overlay, intelligence personnel should—

- Identify routes into and out of the operational area.

- Include major streets, highways, railways, subways, waterways, etc.

- Analyze and depict the communication systems in place that could be used to support the operation (e.g., telephones, radio, television, satellite, and microwave systems). See figure 10-3 on page 10-10.
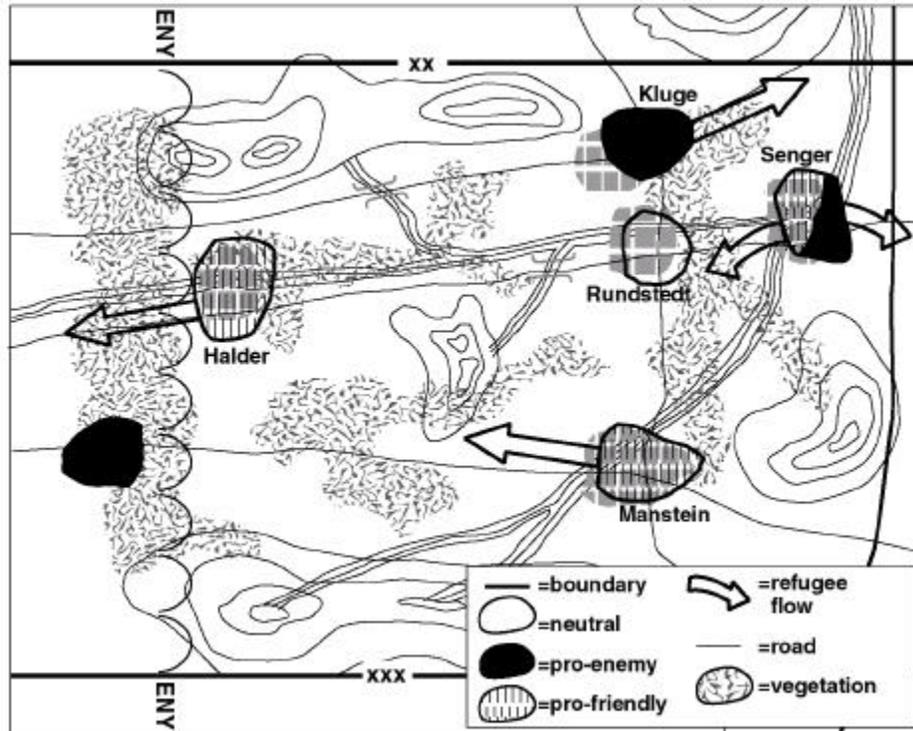
Figure 10-1. Population Status Overlay.
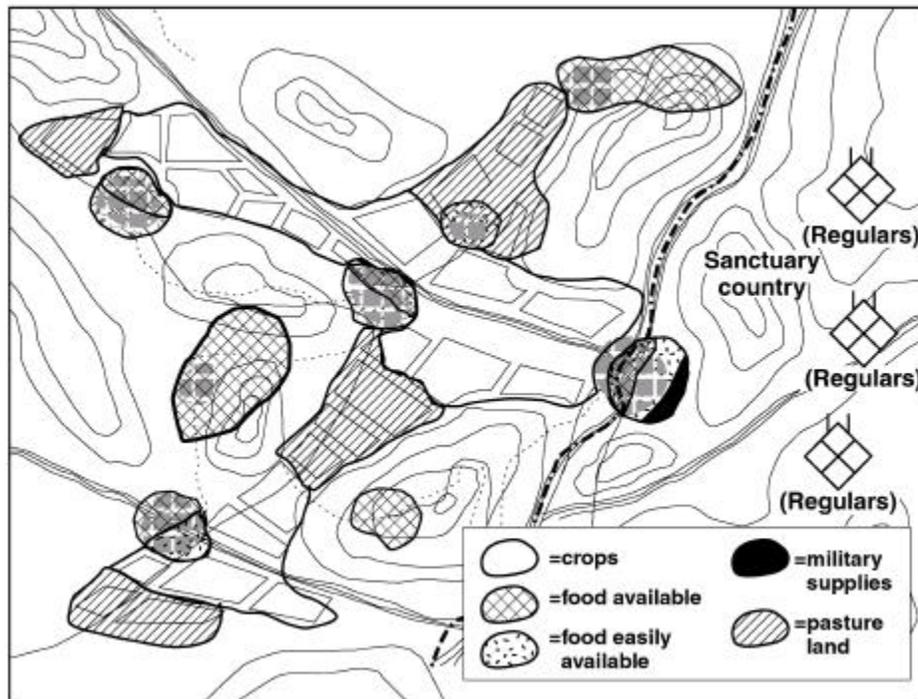
Figure 10-2. Logistics Sustainability Overlay.
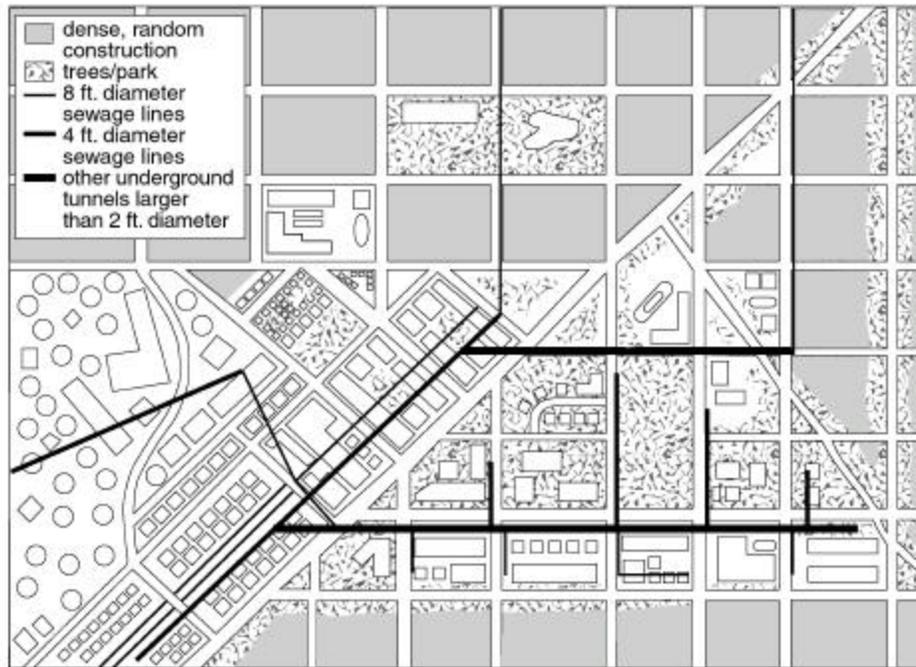
Figure 10-3. Sewers and Subterranean Overlay.

Key Facilities and Target Overlay

Intelligence personnel construct a key facilities and target overlay to depict mission-essential facilities and potential threat targets (e.g., embassies, religious or cultural facilities, military installations, television and radio facilities, government buildings, airports, port facilities, medical facilities, public utilities).

In a noncombatant evacuation operation, the U.S. embassy or the evacuation control center would be considered a mission-essential facility, but it would also be considered a potential target for belligerents.

Coordinates Register and Pattern Analysis Plot Sheet

Because intelligence data bases and doctrinal templates are often limited for many MOOTW situations, intelligence personnel use tools such as the coordinates register and times pattern analysis plot sheets (discussed in chapter 7) to conduct pattern analysis and to rapidly gain an understanding of threat TTP and methodologies.

SECTION IV. JOINT OPERATIONS

Marine Corps forces participate in full partnership with other Services in joint operations, either as a component or as the nucleus of a joint force. A coordinated intelligence effort makes a critical contribution to the success of joint operations. During joint operations, Marine intelligence P&A must be fully integrated with joint intelligence activities to ensure unity of effort, mutual support, and effective employment of limited intelligence resources. Effective intelligence support in joint operations depends on—

● Agreement on policies and procedures.

● Mutual intelligence support.

● Sharing of intelligence capabilities and assets.

- Full interoperability and connectivity among participants.
- Robust liaison.

Responsibilities

The JFC is responsible for intelligence support within the joint command and has responsibility and authority to determine, direct, and coordinate mission-related collection, production, and dissemination activities through centralized or apportioned intelligence requirements management efforts. Component commanders remain responsible for the intelligence function within their commands and employ organic intelligence capabilities to support their assigned missions. The JFC makes national, theater, and joint force intelligence assets available to support the efforts of component commanders. At the same time, component capabilities must be available to assist the joint intelligence effort.

Marine Corps Component Production and Analysis

When assigned as a joint force component, Marine Corps intelligence personnel at each level of command perform the P&A required to support their planning and decisionmaking based on prioritized information requirements; requirements unsatisfied with organic resources are forwarded up the chain of command. Each level of command also disseminates intelligence products to subordinate and adjacent units. Because these higher, adjacent, supporting, and subordinate units may be from a different Service, Marine Corps intelligence sections and units participating in joint operations must—

- Operate according to joint intelligence doctrine, theater TTP, and individual joint force procedures.
- All-source intelligence P&A to satisfy JFC

- Participate in joint intelligence mechanisms for the coordination of IR management (i.e., collection, production, and dissemination requirements).
- Provide P&A support to the joint force headquarters and other component commanders, as required.
- Employ joint or component P&A assets in support of Marine component operations.
- Ensure complete and reliable CIS connectivity within the joint intelligence architecture.
- Exchange liaison elements with the JTF intelligence directorate (J-2), joint intelligence support element (JISE), and/or other joint force component P&A entities as required.

Joint Task Force Headquarters Production and Analysis

A MAGTF may be designated as a JTF with the MAGTF CE forming the nucleus of the JTF headquarters. In this case, the G-2/S-2 must be prepared to function as the JTF J-2 with the MEF CE's intelligence section serving as the base for the establishment of a J-2 section and JISE. The JISE provides intelligence support to the JFC and the entire JTF.

Key Functions

When serving as a JTF J-2, MAGTF intelligence sections must operate according to joint doctrine and theater TTPs. The MAGTF G-2/S-2 must ensure that the P&A portion of the JISE is appropriately augmented or supported by specialists from national agencies, the theater JIC, and other Services possessing the necessary skills to satisfy the force requirements. Key functions performed in the JISE include—

- Centralized collection, production, and dissemination management for joint force and supporting intelligence and reconnaissance assets.

  and component IRs.

- Development and maintenance of intelligence data bases which support planning, operations, and targeting.

- Production of target studies and materials and intelligence support to force protection.

- Access to supporting national and theater intelligence assets.

Support During Planning

Intelligence product formats, standards, and dissemination means must be defined early to ensure JTF elements can exchange and use intelligence products. When possible, these definitions and standards should be planned for in advance and published in an SOP or TTP that is available to other Service units that may be assigned as part of a Marine-led JTF. The TTP or SOP should be exercised whenever possible to refine procedures and ensure unity of effort.

Support During Execution

The JFC, through the J-2, exercises complete coordination and some specified control over the P&A efforts of the joint force. Often, the J-2 is delegated direct IR validation, prioritization, and tasking authority for intelligence production by the supporting theater JIC. Incumbent with that authority, the J-2 is responsible for managing the force IRs and associated PRs.

SECTION V. COMBINED OPERATIONS

Marine Corps forces may participate in a variety of combined operations, ranging from routine bilateral exercises to coalition warfare in major regional contingencies. Instances of unilateral U.S. military operations are becoming less frequent, particularly in MOOTW. Joint doctrine serves as the doctrinal basis for combined or multinational operations. Each coalition or alliance must develop its own TTP for each operation. The coalition commander determines standardized procedures for coalition forces. NATO STANAGs and quadripartite standing agreements between U.S., British, Canadian, and Australian forces provide standards and guidance for the conduct of military operations by forces in these alliances. See STANAG 2936, *Intelligence Doctrine-AIntP-1(A)*, which governs intelligence operations.

Principles

Successful combined intelligence operations are based on the following principles and considerations.

Adjustment of National Differences Among Nations

Effective combined operations require minimizing the differences in national concepts and TTP for intelligence support. Commanders and their intelligence officers must be prepared to make adjustments to U.S. TTP to facilitate the sharing of intelligence and the integration and interoperability of intelligence and reconnaissance operations.

Unity of Effort Against Common Threat

Intelligence operations must be directed at the common threat. A threat to one alliance member must be considered a threat to all.

Intelligence Determination and Planning

Combined force's IRs and procedures should be identified, planned for, coordinated, and exercised prior to execution of operations.

Special Arrangements

Special arrangements should be considered for developing, communicating, and using intelligence where there are differences in nations' language, culture, doctrine, terminology, organization, as well as intelligence and CIS equipment.

Full Exchange of Intelligence

Each coalition member should share intelligence that supports planning and execution of coalition operations. Intelligence personnel should obtain authorization for foreign disclosure and outline procedures for disclosure and release of intelligence as part of the planning process. During execution, intelligence personnel should monitor the exchange of intelligence and adapt requirements to ensure coalition partners' needs are satisfied.

Complementary Intelligence Operations

Intelligence personnel should integrate and employ each nation's intelligence assets to capitalize on their strengths and offset their weaknesses, providing the coalition with the most effective blend of intelligence and reconnaissance capabilities.

Combined Intelligence Centers

A combined command headquarters should be supported by a combined intelligence center. The center should be manned by personnel from each nation and include appropriate linguist and translator support. This center—

● Develops coalition IRs.

● Validates and establishes priorities.

● Develops integrated intelligence plans.

● Commands and controls intelligence operations.

● Fuses intelligence received from alliance members.

● Disseminates this intelligence to the combined force.

Liaison Exchange

Exchange of intelligence liaison personnel between alliance partners bridges national differences and facilitates the exchange of intelligence and intelligence support.

Foreign Disclosure and Releasability

An important consideration for intelligence P&A in combined operations is the ability to release or disclose intelligence to non-U.S. members of the combined force in a timely manner.

Releasability involves the conveyance of information in documentary form to a foreign national. The document may be a publication, map overlay, imagery, computer disk, or any media that is physically provided to the foreign national.

Disclosure is the conveyance of classified information to a foreign national through either oral or visual means. Disclosure covers classified information that is retained by the United States but is discussed, briefed, or viewed by a foreign national. Often, regardless of whether information and intelligence is released or disclosed, the source(s) of that information and intelligence must not be revealed. Although the members of a coalition are united toward a common goal, it must be assumed that members' intelligence services will attempt to gather information on U.S. capabilities.

Policies and Procedures

The Director of Central Intelligence, DOD, Service, and theater policies and procedures govern foreign disclosure and releasability. The theater CINC is ultimately responsible for establishing policy regarding disclosure and releasability. During crises or contingencies, the CINC may choose to delegate authority to subordinate U.S. joint, combined, or component commanders. When so delegated, each recipient of that authority is responsible for publishing releasability and

disclosure guidance and procedures for their subordinate elements.

During combined operations, MAGTF CEs may be required to act as either a functional or Service component headquarters or as a combined task force headquarters, performing foreign disclosure oversight and guidance. Even when operating as an element of a combined force, every unit and individual Marine must be aware of foreign releasability and disclosure guidance.

Based on the established guidance and procedures, intelligence analysts must pay particular attention to the sources of information and the releasability of the information and intelligence derived from each of those sources. Often one version of an intelligence product must be produced for U.S. forces (and some standing alliance or quadripartite partners), and one version must be releasable to the multinational force.

Security

A balance must be struck between safeguarding classified information and intelligence and ensuring coalition partners are adequately informed and protected. One method for enhancing dissemination while providing necessary security of threat intelligence is to use the tear-line technique in the production process. This process ensures that intelligence and other information below the tear line is releasable to the combined force while simultaneously providing for the protection of U.S. collection intelligence sources and methods. Ultimately, the commander has the final authority to authorize foreign disclosure of information and intelligence directly related to a threat to any coalition partner.

Product Format Considerations

In combined operations, the form in which intelligence is conveyed is critical. Many potential coalition partners lack the technological and functional sophistication to collect, produce, and disseminate intelligence and exercise C2 over intelligence operations. Access to networks using SIPRNET or JWICS is generally not possible due to the inability to restrict the user from accessing unauthorized intelligence and friendly information. Language barriers may affect less sophisticated forms of intelligence dissemination such as text documents or briefings. The ability to exchange and use intelligence may vary from partner to partner.

Solutions for these challenges must be addressed early in planning. Generally, production requirements increase as a result of the need to tailor intelligence for multiple recipients. Increased IRs should be matched with increased analysis, production, and dissemination resources to ensure the timely provision of intelligence throughout the force. Where possible, coalition intelligence personnel should assist in the production of intelligence tailored to support their forces.

Information Sources

The intelligence analyst in a combined operation has the increased burden of assessing the reliability and credibility of non-U.S. information and intelligence sources. While foreign militaries may lack the sophisticated technical means available to the United States, they often enjoy superior capabilities in HUMINT, particularly if they are ethnically or linguistically related to the population of the AO. The analyst may need time to establish the reliability of the source or the accuracy of the information. In addition, the analyst must be aware that foreign forces may withhold, filter, or distort the information provided to the United States to safeguard their intelligence sources and methods. The analyst should apply the techniques and procedures for assessing reliability and accuracy and be conscious of biases that may develop due to preconceived notions regarding the source.

SECTION VI. PRE-CRISIS PHASE

The MAGTF pre-crisis intelligence P&A efforts center on data base management, ongoing production activities, and training.

Data Base Management

The key to effective intelligence and CI P&A is the identification and maintenance of hard copy and electronic intelligence sources and data bases. Intelligence personnel should attempt to develop and maintain relevant data bases during day-to-day operations in garrison. Without the necessary pre-crisis P&A, the ability to provide needed support in a crisis will be diminished. Key sources of intelligence data include the intelligence reference library, statement of intelligence interest, and intelligence data bases.

Intelligence Reference Library

Although intelligence is produced and disseminated increasingly in electronic form, each intelligence section is required to maintain a basic intelligence library in support of command and intelligence functioning. The library should include publications which are tailored to the unit's mission and echelon and are necessary to support day-to-day intelligence planning, operations, and contingency operations. Publications should include maps, charts, imagery, graphics, pertinent finished intelligence, and key supporting documents. Intelligence library publications are categorized as required and nonrequired.

Required Publications

As higher headquarters-directed holdings, these publications represent the minimum required material needed to support intelligence and command functioning. The intelligence officer is responsible for reviewing and validating the command and subordinate command's required holdings to ensure that they meet the minimum

intelligence operation support requirements. Requests for additions or deletions of publications will be submitted via the chain of command according to the guidance contained in current directives.

Nonrequired Publications

Intelligence sections maintain nonrequired publications to supplement minimum required holdings, to conduct planning and training, or to use as reference material. The intelligence officer is responsible for ensuring nonrequired publications are available to support intelligence requirements.

National, Service, and unified commands produce intelligence publications that provide intelligence and guidance for intelligence functioning. Procurement procedures are contained in current directives and local SOPs. The manpower or personnel staff officer (G-1/S-1) is responsible for the procurement of doctrinal and tactical publications (e.g., JPs, MCDPs, MCWPs, MCRPs, FMs); however, the intelligence officer is responsible for identifying requirements for these publications.

Statement of Intelligence Interest

The statement of intelligence interest (SII) is the vehicle by which commands register requirements for all-source finished intelligence. Each command must establish an SII with DIA to receive automatic distribution of intelligence publications in support of command requirements. The intelligence officer is responsible for coordinating with the appropriate Dissemination Program Manger (DPM) to ensure the commands's SII is up to date. Statements of intelligence interest are requested through DIA's online Joint Dissemination System (JDS) via INTELINK/INTELINK-S under the Director of Information Systems and Services.

Accounts can be applied for online and are forwarded to the appropriate DPM, which is

Marine Forces, Atlantic, Marine Forces, Pacific, or MCIA, respectively. Once the account is established, it may be modified online. The appropriate MARFOR headquarters or MEF CE intelligence officer determines specific policies governing echelons that may apply for JDS accounts. The Defense Intelligence Production Schedules list DOD planned general intelligence production. Most intelligence producers maintain some type of production forecast on their INTELINK and INTELINK-S web sites.

Intelligence Data Bases

The establishment of intelligence data bases allows the intelligence section to manage and use the large volume of available information and intelligence. Intelligence agencies have established various data bases suited to their needs, resulting in different systems available to support intelligence operations at various levels. The intelligence officer at each command echelon must be aware of relevant intelligence agencies' data bases and plan for their use to support operations. In addition, the intelligence officer should maintain access to appropriate national, theater, and Service data bases.

Data bases are available to Marine Corps commands equipped with the JDISS and the IAS, either as applications or through access to INTELINK and INTELINK-S. As modern information systems technologies mature, the structure and titles of the data bases change frequently. The MCIA 1586-001-96, *MAGTF Contingency Reference Guide*, is a compendium of agencies, products, data bases, and INTELINK sites of potential interest. This publication is available in hard copy, disk, and on-line via both INTELINK and INTELINK-S. In addition, national, theater, and Service producers have created electronic links from their INTELINK web sites to other pertinent sites.

Each intelligence section should create local data bases to support their contingency planning and

the development of contingency intelligence support products. Most current intelligence files can be maintained on automated data base systems. Finished intelligence products, imagery, maps, and graphics are available on-line to facilitate data search, access, and retrieval. When assembled, a pre-crisis data base should consist of—

- Current target country intelligence and CI estimates.
- Intelligence reference publications (e.g., intelligence TTP for combatant commands the unit may support, intelligence TTPs or SOPs for other Services with which the unit may operate).
- Standard intelligence data base segments (i.e., modernized integrated data base).
- Mapping, charting, geodetic, and other geospatial holdings.
- Imagery library and related holdings.
- Current intelligence files.
- Open source publications.

Production

Pre-crisis intelligence production includes contingency intelligence production, IPB, exercise intelligence, and other intelligence requirements.

Contingency Intelligence

The main pre-crisis P&A effort of MAGTF and MSC intelligence sections is contingency intelligence production in support of potential missions. The intelligence section must review standing contingency plans and tasking in conjunction with staff operations and plans sections. Intelligence personnel should coordinate with operations and plans personnel to define the mission, scope, and tasks using the following methodology.

Define the Intelligence Requirements

The IRs should be well defined after coordination with commanders and their staffs. Properly focused IRs save time and valuable intelligence assets.

Research Data Bases

Available intelligence data bases should be reviewed before submitting RFIs, ICRs, IPRs, IDRs, or PRs.

Analyze and Synthesize Data

Intelligence personnel must consider data, information, and intelligence from all available sources for analysis and synthesis.

Prepare the Products

Products must be prepared in user-friendly formats and delivered in a timely manner.

Intelligence Preparation of the Battlespace

Pre-crisis IPB is conducted to develop basic and current intelligence needed to support the planning and execution of contingency operations. The extensive and detailed nature of intelligence required to support expeditionary operations demands that a comprehensive research, analytical, and production effort be undertaken far in advance of the initiation of such operations. This demands that commanders and staff principals conduct detailed contingency planning across functional areas and command echelons to identify specific detailed IRs. The pre-crisis period offers the opportunity to carry out a thorough, measured study of potential areas of MAGTF employment. Driving contingency planning efforts, the pre-crisis IPB is the principal contribution of intelligence to combat readiness.

Pre-Crisis Products

The IPB products that can be generated in pre-crisis analysis and production include—

● Battlespace characteristics analysis.
● Terrain and weather analyses and templates.
● Weather effects matrices for various seasons and conditions.
● Threat models.
● Threat capabilities assessments.
● Threat COAs, when possible.

Results

The completed pre-crisis IPB process provides the following products for each potential contingency area:

● Tailored intelligence data base(s).
● Contingency intelligence study.
● Intelligence and counterintelligence estimates.
● Validated intelligence collection, production, and dissemination requirements.
● Integrated intelligence operations plan (collection, production and dissemination).
● Tentative tasks for supporting intelligence and reconnaissance units.

Additional Purposes

In addition to the primary purpose of supporting contingency planning and execution, pre-crisis IPB—

● Develops an intelligence data base for selected areas.
● Educates personnel on potential missions and AOs.
● Identifies intelligence collection, production, and dissemination shortfalls (e.g., IRs, key personnel, and equipment).
● Trains intelligence personnel in the IPB process and the development of intelligence in support of actual contingency missions.

Exercise Intelligence

Exercise intelligence production should follow the same procedures as contingency intelligence production and should result in products that mirror image what will be used in an actual operation. The intelligence section should use real-world data bases, IPB, and scenarios whenever possible to enable realistic training of intelligence personnel and staff and to provide solid area and threat familiarization training for unit Marines and Sailors.

When conducting field training exercises, the intelligence section must provide the same quality of GEOINT, IMINT, SIGINT, CI or HUMINT, and other intelligence support as would be provided in an actual operation. Weather conditions and terrain will factor heavily into the success and safety of an exercise involving the actual maneuver and movement of air, land, and seaborne forces.

Other Intelligence

In garrison, the intelligence section is expected to provide indications and warning information and promote threat awareness. The intelligence section must keep the commander and staff, as well as those of subordinate units, informed on items of interest in the unit's assigned or potential contingency areas. This can be accomplished by providing periodic current intelligence briefings, affording access to intelligence publications, and/or preparing current intelligence read boards for commanders and staff members. With increased access to web technologies, the commander, staff, and subordinate units can review daily pertinent information posted on a web site. The intelligence section should always be prepared to field impromptu requirements as directed by the commander or staff.

Production and Analysis Training

While in garrison, intelligence P&A training is accomplished through individual training, element training, unit training, and MAGTF training.

Individual Training

The intelligence analyst receives an introduction to P&A topics at formal intelligence military occupational specialty training courses. However, to develop P&A proficiency, the intelligence section must have a continuing training program to enhance P&A skills.

Skills Development

The Marine intelligence analyst must train to further develop—

- Comprehensive study and understanding of threat forces' doctrine, operational and functional methodologies, and TTP.
- Familiarity with potential operating areas' cultural, ethnic, sociological, and religious orientations, organization, perspectives, values, and issues.
- IPB skills, which cover analysis of contingency AOs, threat COGs, critical vulnerabilities, tactical practices, capabilities, and COAs.
- Intelligence research methods (e.g., information and intelligence sources, agencies, functions, capabilities, limitations, automated information systems, data base availability and procedures).
- Methods of collecting and reporting information.
- Processing, recording, and filing information methods (e.g., manually and electronically preparing overlays and posting situation maps).

- Integration, analysis, evaluation, interpretation, and information synthesis skills to rapidly produce tailored intelligence products.

- Skills in the use of automated information systems to manage data, analyze information, and produce and disseminate GENSER and SCI intelligence products, using all means of presentation (e.g., briefings, text reports, graphics, overlays).

Exercises

Wargaming and command post exercises (CPXs) are the best vehicles for analytical training and must be done independently of major exercises to enhance analytical skills before they are needed. Normally, the majority of training comes as a result of practical application (i.e., preparation of IPB and other products in response to exercise or contingency requirements). Each product must be evaluated and critiqued with the analyst who developed it to improve their skills. The intelligence officer's wargaming goals should include—

- Providing participants with a thorough area and situation orientation.

- Validating the scope and area coverage of the initial IPB.

- Determining gaps in existing intelligence.

- Identifying areas for additional study.

- Developing new collection, production, and dissemination requirements.

- Developing an initial intelligence concept of operations and supporting contingency collection, production, and dissemination plans.

Element Training

Intelligence sections and elements must have an integrated training program to develop the individual, team, and unit skills and capabilities necessary to execute intelligence and reconnaissance operations during MAGTF operations. Section training should first emphasize building specialized individual production skills. Once individual skills are mastered, cross-training and develop-

ment of depth should be emphasized. A building block approach is used, starting with small group or team training (e.g., watch section, country team, or production element) and working up to exercises employing the entire G-2/S-2 section and those of subordinate commands.

While a command staff exercise, CPX, or field exercise normally provides the best environment for the conduct of intelligence section training, independent G-2/S-2 section training should be conducted in advance of a major command training event. This allows the section to develop and test SOPs, cross train personnel in a variety of functions, and conduct indepth instruction in intelligence P&A. Each production requirement or exercise is a training opportunity and should have specific training objectives associated with it.

Unit Training

Intelligence units conduct training according to their unit's specific mission and functions. As intelligence specialty units are often employed as small, independent subelements, the majority of their training should be targeted at the team, subteam, or detachment level. Intelligence unit training should also emphasize the planning and execution of operations in response to the supported unit's requirements.

Each unit training evolution is an opportunity to enhance P&A training by requiring the development of objectives for each exercise. In addition, unit training must encompass specific, detailed intelligence objectives for commanders and other staff section personnel. Unit training for P&A should—

- Train intelligence sections in meeting tactical requirements by exercising deliberate and immediate tactical production.

- Exercise the IR management process and intelligence cycle between consumers and producers.

- Test and improve standard product formats and content.

- Critique and provide P&A effort feedback.

- Evaluate the effectiveness of integrating intelligence production operations with those of collection and dissemination.

MAGTF Training

This training combines MAGTF units and trains on a larger scale, which provides intelligence personnel the opportunity to exercise the production management function as well as integrate collections and dissemination with P&A. The MAGTF training provides the opportunity to—

- Test requirement priorities and procedures.

- Test the integrated production between the MEF CE CIC, other intelligence and reconnaissance units, and MSCs.

- Determine if the resulting test products meet the commander and staff's needs.

SECTION VII. WARNING AND DEPLOYMENT PHASE

Warning and deployment sets the intelligence foundation for the entire operation. During this phase, intelligence is expected to produce a high volume of critical planning and decision-making support in a short period of time. This phase is further complicated by the need to prepare P&A elements for deployment within the MAGTF. The IPB and contingency intelligence study prepared in the pre-crisis period and the knowledge and skills gained by intelligence personnel, commanders, and other staff personnel during training exercises is the key to the ability to deliver intelligence support and products early in the warning or deployment phase. Initial P&A efforts, production management, and standardization of products frame the warning and deployment intelligence phase of operations.

Initial Production and Analysis

Determine Initial Requirements

Key to the success in determining initial IRs is a clear understanding of the command's mission, assigned tasks, commander's intent and guidance, and a defined AO. Command and staff element requirements should be integrated so that comprehensive products can be developed to meet as many needs as possible.

The P&A goal should be to produce a product only once to avoid duplicating effort and wasting time and assets. Time is the driving factor in determining the amount of detail that can be put into the P&A effort in the warning and deployment phase.

Assemble and Focus Data Bases

With an understanding of the mission and AO, intelligence personnel can refine data bases and other intelligence holdings. Units should agree on standardization of products and data bases early on in this process. Product and data base standardization should be a minor effort if SOPs or TTPs exist and units have worked and coordinated together previously in IPB contingency intelligence study preparation and training. This effort is more complicated in a joint or combined force.

Develop Initial Estimate and Supporting Studies

Preparing the intelligence estimate is easier if the contingency intelligence study is prepared and IPB is in progress. The initial IPB provides the baseline descriptive intelligence to initiate planning and, when paired with the contingency

intelligence study, supports the preparation of an initial estimate and supporting studies.

Develop Collection, Production, and Dissemination Requirements

Shortfalls identified during preparation of the initial intelligence and CI estimates become the basis for development of new collection, production, and dissemination requirements beyond organic capabilities. New requirements must be turned into collection, production, and dissemination plans, necessitating support requests to component, JTF, and/or theater commands for action. The MAGTF intelligence section is responsible for developing these requirements and for coordinating with the planning section to ensure requirements are focused on operations.

Production Management

Production management validates and prioritizes IPRs among competing requirements to determine which ones have the most impact on the mission's outcome. Production must be managed ruthlessly during this phase to ensure that limited assets are properly focused. The commander must be actively involved in—

- Directing intelligence operation efforts.
- Setting priorities.

- Providing the intelligence officer with guidance on where to focus the effort and what requirements are most important.
- Evaluating the effectiveness of operations.

Continuous interaction with staff planners and subordinate commanders and intelligence officers is required to ensure ongoing production supports the development of friendly COAs. Requirements typically change frequently during this phase as COAs are identified, refined, or rejected. Production management must ensure flexibility and responsiveness. Time is the critical element in production during this phase, because requirements must be met on time, even at the expense of detail.

Standardization of Products

The use of standard products simplifies production and dissemination. To provide a cut-and-paste or fill-in-the-blank capability, products should be standardized and automated. Establishing standard products and a regular update schedule is an effective way of managing production and dissemination during this phase. Product standardization can head off constant requests for updates by organizations, which can drain production and dissemination resources and detract the focus from essential requirements. A system of standard products should be developed during training and carried over with only minor modifications.

SECTION VIII. EXECUTION PHASE

In addition to production management, MAGTF intelligence P&A during the execution phase of operations involves support to current operations, future operations, future plans, and targeting.

Production Management

Production management remains critical during the execution phase, as requirements tend to

change rapidly. P&A resources must be focused on the main effort according to the commander's guidance and intent, the PIRs, and the unit's operations and intelligence concepts. The commander must balance the production effort between support to current operations and future operations planning. Usually, the higher the echelon, the greater the focus is on future operations and planning; the lower the echelon the greater the focus is on current operations. Normally, at

higher command echelons, commanders and intelligence personnel must remain responsive to their own and lower echelon commanders' tactical needs. During execution, the time element is even more critical, because execution often depends on timely receipt of intelligence required for decisionmaking.

Support to Current Operations

Support to current operations consists primarily of immediate tactical production that is keyed to the commander's decision points, PIRs, and location of HPTs. Each piece of data, information, or intelligence received undergoes immediate tactical processing and assessment to determine if it is pertinent to the ongoing operation. If deemed pertinent, the information is quickly analyzed, impacts are determined, intelligence estimates are prepared, and results are disseminated. Intelligence personnel must maintain situational awareness and understand the operational situation, current PIRs and IRs, and likely enemy reactions to anticipate and meet the needs for immediate tactical production.

Support to current operations must include P&A in support of deep and rear operations and resist focusing on the close battle. Intelligence support to current operations must be balanced against the need to support future operations and plans. Assets cannot be devoted to current operations at the expense of supporting planning for future operations. In addition to short, tailored, mission-focused products in response to an immediate tactical need, production includes regularly scheduled update briefs and intelligence summaries that help maintain a common picture of the battlespace supporting situation development.

Support to Future Operations

Depending on the timeframe of the operation, scope of the operation, and level of command,

support to future operations consists of a mix of immediate and deliberate production. Future operations focus on the deep battle, which is defined either by distance or time. Intelligence products in support of future operations must focus on that same planning window and seek to provide the future operations team with a coherent projection of the battlespace and threat within that window.

The future operations cell focuses on a rolling or near-continuous IPB process by generating new COAs, ICRs, IPRs, IDRs and targeting priorities, DSTs, and synchronization matrixes as the battle or operation unfolds. Intelligence production supporting the future operations cell is focused on products generated during IPB, which have been constantly modified by the results of friendly and threat actions. Daily situation update briefings are necessary to ensure the future operations team remains aware of current actions that may impact future operations.

The primary intelligence P&A contributions are the BDA results and the estimate of the situation focused on the appropriate planning horizon. The BDA provides input into combat assessment, which in turn helps determine the nature of future operations. Derived from the continuous IPB effort, the situation estimate provides the basis for planning.

During future operations planning, IPB and estimates draw on and extend previous work rather than generating new production. The intelligence P&A effort requires continuous interaction with the future operations cell. As decisions are made concerning future operations, integrated collection, production, and dissemination requirements are developed and prioritized, missions are assigned, and mission-specific products are prepared. Management of the time element is critical to ensure that products reach the future operations cell, mission planners, and executers in a timely manner.

Support to Future Plans

The MEF CEs, components, and JTF headquarters often require an additional planning cell focused on the next campaign or major phase change within the CINC's campaign plan. This cell, or operational planning team, in the MEF CE looks into the future and deals more in assumption than fact. Production in support of future planning tends to be deliberate and generalized but still encompasses the basic elements of IPB.

Often, the future plans cell is located out of the immediate operations area and may locate in close proximity to the CINC headquarters to facilitate communication and collaboration. Given the timeframe and location of potential future operations, the supporting theater intelligence center may be more suited to produce required intelligence products, with MAGTF intelligence personnel tailoring these products to support the needs of the future plans cell.

Support to Targeting

Intelligence support to targeting requires a continuous, integrating support effort to current and future operations. This support consists of target development (generated through IPB), immediate tactical production of new intelligence related to particular targets, and BDA of the mission execution results. At higher command echelons, the targeting cycle can span days, while at lower echelons it may span hours or minutes. In MAGTFs with organic fixed-wing aviation, the intelligence support to targeting is driven by the ATO cycle. An important goal is the synchronization of the collection and production phases with the appropriate phases of the PDE&A and ATO cycles to ensure the provision of relevant and timely target intelligence.

APPENDIX A. INTELLIGENCE ESTIMATE FORMAT

An intelligence estimate can be prepared at any level, from the battalion or squadron through the Marine expeditionary force command element and Marine Corps forces headquarters levels. The intelligence estimate should be succinct, yet provide the commander and staff the necessary information for decisionmaking. The scope and detail of an intelligence estimate are governed by the—

- Level of command preparing it.
- Nature of the operation it is intended to support.
- Current availability of intelligence.
- Prior contingency planning.
- Time and resources available.

Whenever possible, the intelligence estimate should clearly present the analysis and conclusions developed during intelligence preparation of the battlespace (IPB). The finished estimate may be in written, graphic, or verbal form, but should always follow the general five-paragraph structure presented in the following pages. Subparagraphs and tabs may be added and omitted based on their relevance to the stated mission. For topics that require a large amount of data, information, and intelligence (i.e., beaches, weapons capabilities, technical characteristics), the salient facts and conclusions should be summarized in the body of the estimate and the detailed data included as a tab.

For a discussion of IPB and the intelligence estimate, see chapter 4. Chapter 5 provides a discussion of the various factors that constitute paragraph 2 of the estimate. Chapter 6 provides a discussion of the factors that constitute paragraph 3.

The sample on page A-2 is the format for an intelligence estimate in support of conventional combat operations. The sample on page A-10 is the format for an intelligence estimate in support of military operations other than war (MOOTW).

**SAMPLE FORMAT OF AN INTELLIGENCE ESTIMATE
IN SUPPORT OF CONVENTIONAL COMBAT OPERATIONS**

(Local variations and modifications may be made as necessary to meet requirements.)

CLASSIFICATION

Copy no.__of__copies
OFFICIAL DESIGNATION OF COMMAND
PLACE OF ISSUE
Date/time of issue
Message reference number

INTELLIGENCE ESTIMATE (NUMBER) (U)

(U) REFERENCES
    (a) Maps and charts
    (b) Other pertinent intelligence documents and online data bases

Intelligence and Information Cutoff Time Used for this Estimate: (Provide date-time group)

1. (U) Mission. (The command's restated mission as developed during the mission analysis phase of the planning process.)

2. (U) Characteristics of the Area of Operations. (State conditions that exist and indicate the effect of these conditions on enemy capabilities and the assigned mission. Assess the estimated effects of these conditions on both enemy and friendly capabilities and operations.)

    a. (U) Military Geography

        (1) (U) Topography

        (2) (U) Drainage

        (3) (U) Vegetation

        (4) (U) Surface Materials

        (5) (U) Military Aspects of Terrain

        (6) (U) Effects of Terrain on Enemy and Friendly Capabilities and Operations

    b. (U) Hydrography

        (1) (U) Coastline Description

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CLASSIFICATION

    (2) (U) <u>Hydrographic Conditions</u>

       (a) (U) <u>Surf</u>

       (b) (U) <u>Tides</u>

       (c) (U) <u>Currents</u>

    (3) (U) <u>Beaches</u>

    (4) (U) <u>Effects of Hydrography on Enemy and Friendly Capabilities and Operations</u>

  c. (U) <u>Climate and Weather</u>

    (1) (U) <u>Type and Characteristics</u>

    (2) (U) <u>Temperature</u>

    (3) (U) <u>Precipitation</u>

    (4) (U) <u>Visibility</u>

    (5) (U) <u>Winds</u>

    (6) (U) <u>Light Data</u>

    (7) (U) <u>Flight Conditions</u>

    (8) (U) <u>Effects of Weather on Enemy and Friendly Capabilities and Operations</u>

  d. (U) <u>Transportation</u>

    (1) (U) <u>Airfields</u>

    (2) (U) <u>Helicopter Landing Zones</u>

    (3) (U) <u>Port Facilities</u>

    (4) (U) <u>Roads</u>

    (5) (U) <u>Railroads</u>

    (6) (U) <u>Inland Waterways</u>

    (7) (U) <u>Effects of Transporation on Enemy and Friendly Capabilities and Operations</u>

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CLASSIFICATION

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e. (U) <u>Civilian Telecommunications and Media</u>

   (1) (U) <u>International</u>

   (2) (U) <u>Domestic</u>

   (3) (U) <u>Mass Communications</u>. (Types, capabilities, and key facilities.)

   (4) (U) <u>Radio</u>

      (a) (U) <u>Television</u>

      (b) (U) <u>Print Media</u>

   (5) (U) <u>Effects of Telecommunications and Media on Enemy and Friendly Capabilities and Operations</u>

f. (U) <u>Economics and Infrastructure</u>

   (1) (U) <u>General Economic Activity and Conditions</u>. (Industry, public works and utilities, finance, banking, agriculture, trades and professions, labor force, etc.)

   (2) (U) <u>Monetary System</u>

   (3) (U) <u>Power and Utilities</u>

   (4) (U) <u>Petroleum, Oils, and Lubricants Facilities</u>

   (5) (U) <u>Effects of Economics and Infrastructure on Enemy and Friendly Capabilities and Operations</u>

g. (U) <u>Politics</u>

   (1) (U) <u>Political System and Climate</u>

   (2) (U) <u>Local Political Conditions</u>

   (3) (U) <u>Local Political Leaders</u>

   (4) (U) <u>Policy and Attitudes Towards the U.S. and the U.S. Military</u>

   (5) (U) <u>Effects of Political Situation on Enemy and Friendly Capabilities and Operations</u>

Page number

CLASSIFICATION

CLASSIFICATION

    h. (U) <u>Sociology</u>

        (1) (U) <u>Cities and Towns</u>

        (2) (U) <u>Population and Distribution of Area and of Key Cities and Towns</u>

        (3) (U) <u>Ethnic Composition</u>

        (4) (U) <u>Languages</u>

        (5) (U) <u>Religions</u>

        (6) (U) <u>Customs and Norms</u>

        (7) (U) <u>Social Institutions and Attitudes</u>

        (8) (U) <u>Effects of Sociological Situation on Enemy and Friendly Capabilities and Operations</u>

    i. (U) <u>Health and Medical</u>

        (1) (U) <u>Food Supply</u>

        (2) (U) <u>Water Supply</u>

        (3) (U) <u>Diseases and Other Medical Problems</u>

        (4) (U) <u>Plant and Animal Hazards</u>

        (5) (U) <u>Sanitation</u>

        (6) (U) <u>Medical Facilities</u>

        (7) (U) <u>Effects of Health and Medical Situation on Enemy and Friendly Capabilities and Operations</u>

3. (U) <u>Enemy Military Situation</u>

    a. (U) <u>Ground Forces</u>

        (1) (U) <u>Composition, Organization, and Strengths</u>. (Describe the structure of enemy forces [i.e., order of battle] and describe unusual organizational features, identity, etc. State the number and size of enemy units in and others available for use in the area of operations. Provide estimated combat effectiveness of enemy forces.)

Page number

CLASSIFICATION

CLASSIFICATION

(2) (U) <u>Disposition, Locations, Movements, and Activities</u>. (Describe the geographic location and latest known activities of enemy forces, including command and control facilities; fire support elements; and other key combat support forces.)

  (a) (U) <u>Committed Forces</u>. (For ground forces, include units currently in contact or with which contact is imminent within the unit's area of operations, regardless of the specific friendly course of action. For amphibious or forcible entry operations, committed forces would be those that could immediately engage friendly units at their point of insertion. All fire support assets within range are normally considered committed, regardless of subordination. Conventional military forces are referred to by numbers of unit types [e.g., armor, infantry] two echelons below the friendly unit. Guerrilla or insurgent forces are expressed in terms of total numbers of personnel and fire support weapons.)

  (b) (U) <u>Reinforcements</u>. (Describe the enemy's reinforcement capabilities in terms of possible forces and weapons that can react in time to affect the accomplishment of the mission. Factors to be considered include time available to react, terrain, weather, road and rail nets, transportation, replacements, and possible aid from sympathetic or participating neighbors.)

(3) (U) <u>Weapons and Equipment</u>. (Describe the operational capabilities and technical characteristics of major items of equipment in the enemy's inventory.)

(4) (U) <u>Command and Control</u>

  (a) (U) <u>Organization</u>

  (b) (U) <u>Key Command and Control Nodes</u>

  (c) (U) <u>Communications and Information Systems</u>

(5) (U) <u>Logistics</u>. (Describe levels of supply, resupply ability, and capacity of beaches, ports, roads, railways, airfields, and other facilities to support supply and resupply. Consider transportation, hospitalization and evacuation, military construction, labor resources, and maintenance of combat equipment, etc.)

(6) (U) <u>Training, Tactics, Operating Patterns</u>

(7) (U) <u>Capabilities and Effectiveness</u>

Page number

CLASSIFICATION

CLASSIFICATION

    b. (U) <u>Naval Forces</u>

        (1) (U) <u>Composition, Organization, and Strengths</u>

        (2) (U) <u>Disposition, Locations, Movements, and Activities</u>

        (3) (U) <u>Weapons and Equipment</u>

        (4) (U) <u>Command and Control</u>

           (a) (U) <u>Organization</u>

           (b) (U) <u>Key Command and Control Nodes</u>

           (c) (U) <u>Communications and Information Systems</u>

        (5) (U) <u>Logistics</u>

        (6) (U) <u>Training; Operational and Tactical Doctrine and Tactics, Techniques, and Procedures; Methods of Operations; and Operating Patterns</u>

        (7) (U) <u>Capabilities and Effectiveness</u>

    c. (U) <u>Air Forces</u>

        (1) (U) <u>Composition, Organization, and Strengths</u>

        (2) (U) <u>Disposition, Locations, Movements and Activities</u>

        (3) (U) <u>Weapons and Equipment</u>

        (4) (U) <u>Command and Control</u>

           (a) (U) <u>Organization</u>

           (b) (U) <u>Key Command and Control Nodes</u>

           (c) (U) <u>Communications and Information Systems</u>

        (5) (U) <u>Logistics</u>

        (6) (U) <u>Training; Operational and Tactical Doctrine and Tactics, Techniques, and Procedures; Methods of Operations; and Operating Patterns</u>

        (7) (U) <u>Capabilities and Effectiveness</u>

Page number

CLASSIFICATION

CLASSIFICATION

    d. (U) <u>Air Defense Forces</u>

       (1) (U) <u>Composition, Organization, and Strengths</u>

       (2) (U) <u>Disposition, Locations, Movements, and Activities</u>

       (3) (U) <u>Weapons and Equipment</u>

       (4) (U) <u>Command and Control</u>

          (a) (U) <u>Organization</u>

          (b) (U) <u>Key Command and Control Nodes</u>

          (c) (U) <u>Communications and Information Systems</u>

       (5) (U) <u>Logistics</u>

       (6) (U) <u>Training; Operational and Tactical Doctrine and Tactics, Techniques, and Procedures; Methods of Operations; and Operating Patterns</u>

       (7) (U) <u>Capabilities and Effectiveness</u>

    e. (U) <u>Paramilitary and Security Forces</u>

       (1) (U) <u>Composition, Organization, and Strengths</u>

       (2) (U) <u>Disposition, Locations, Movements, and Activities</u>

       (3) (U) <u>Weapons and Equipment</u>

       (4) (U) <u>Command and Control</u>

          (a) (U) <u>Organization</u>

          (b) (U) <u>Key Command and Control Nodes</u>

          (c) (U) <u>Communications and Information Systems</u>

       (5) (U) <u>Logistics</u>

       (6) (U) <u>Training; Operational and Tactical Doctrine and Tactics, Techniques, and Procedures; Methods of Operations and Operating Patterns</u>

       (7) (U) <u>Capabilities and Effectiveness</u>

    f. (U) <u>Command and Control Warfare Capability</u>

Page number

CLASSIFICATION

CLASSIFICATION

    (1) (U) <u>Intelligence, Counterintelligence, and Reconnaissance Capabilities</u>

    (2) (U) <u>Electronic Warfare Capabilities</u>

    (3) (U) <u>Psychological Warfare Capabilities</u>

    (4) (U) <u>Deception Capabilities</u>

    (5) (U) <u>Operational Security Capabilities</u>

  g. (U) <u>Nuclear, Biological and Chemical Capabilities</u>

  h. (U) <u>Night Combat Capabilities</u>

  i. (U) <u>Unconventional Warfare Capabilities</u> (e.g., guerrilla, subversion, sabotage, terrorism)

4. (U) <u>Capabilities and Analysis</u>. (List separately each enemy capability that can affect the accomplishment of the assigned mission. Each enemy capability should contain information on what the enemy can do, where they can do it, when they can start it and get it done, and what strength they can devote to the task. Analyze each capability in light of the assigned mission, considering applicable factors from paragraphs 2 and 3, and attempt to determine and give reasons for the estimated probability of adoption by the enemy. Examine the enemy's capabilities by discussing the factors that favor or militate against its adoption by the enemy. The analysis of each capability should also include a discussion of enemy strengths and vulnerabilities associated with that capability. Also, the analysis should include a discussion of any indications that point to possible adoption of the capability. Finally, state the estimated effect the enemy's adoption of each capability will have on the accomplishment of the friendly mission. The term "capabilities" includes not only the general courses of action open to the enemy (e.g., attack, defend, withdraw), but also the particular courses of action possible under each general course of action. These courses of action should correspond exactly to enemy course of action models developed during step 4 of IPB.)

CLASSIFICATION

5. (U) <u>Conclusions and Vulnerabilities</u>. (State conclusions resulting from discussion in paragraph 4 to include: enemy centers of gravity, critical and other vulnerabilities and estimated exploitability of these by friendly forces, enemy courses of action beginning with the most probable and continuing down the list in the estimated order of probability, and the estimated effects adoption of each capability would have on the friendly mission.)

/s/ _____
_____

TABS: (omit or add other tabs as required)
A - Tactical Study of Terrain
B - Beach Studies
C - Climatology Study
D - Airfield Studies
E - Helicopter Landing Zone and Drop Zone Studies
F - Port Studies
G - Lines of Communications Study
H - Order of Battle Study

Page number

CLASSIFICATION

SAMPLE FORMAT OF AN INTELLIGENCE ESTIMATE IN SUPPORT OF MILITARY OPERATIONS OTHER THAN WAR

CLASSIFICATION

Copy no.__of__copies
OFFICIAL DESIGNATION OF COMMAND
PLACE OF ISSUE
Date/time of issue
Message reference number

INTELLIGENCE ESTIMATE (NUMBER) (U)

(U) REFERENCES
    (a) Maps and charts
    (b) Other pertinent intelligence documents and online data bases

Intelligence and Information Cutoff Time Used for this Estimate: (Provide date-time group)

1. (U) Mission. (The command's restated mission as developed during the mission analysis phase of the planning process.)

2. (U) Characteristics of the Area of Operations. (Discuss characteristics of the host nation [HN], the area, and their probable effects upon the threat, the mission force, and the host government.)

    a. (U) Geography

        (1) (U) Strategic Location

            (a) (U) Neighboring Countries and Boundaries

            (b) (U) Natural Defenses, Including Frontiers

            (c) (U) Points of Entry and Strategic Routes

        (2) (U) Size and Dimensions

        (3) (U) Relief

        (4) (U) Beach Data

        (5) (U) Hydrography

            (a) (U) Coastal

Page number

CLASSIFICATION

CLASSIFICATION

        (b) (U) <u>Lakes</u>

        (c) (U) <u>Rivers</u>

    (6) (U) <u>Land Use</u>

    (7) (U) <u>Geological Basics</u>

    (8) (U) <u>Vegetation</u>

    (9) (U) <u>Water Sources</u>

    (10) (U) <u>Natural Foods</u>

    (11) (U) <u>Population Centers</u>

    (12) (U) <u>Wildlife</u>

  b. (U) <u>Climate and Weather</u>

    (1) (U) <u>Type and Characteristics</u>

    (2) (U) <u>Temperature</u>

    (3) (U) <u>Precipitation</u>

    (4) (U) <u>Visibility</u>

    (5) (U) <u>Winds</u>

    (6) (U) <u>Light Data</u>

    (7) (U) <u>Flight Conditions</u>

    (8) (U) <u>Seasonal Effects of Weather on Terrain and Visibility</u>

  c. (U) <u>Demographics</u>

    (1) (U) <u>History</u>

    (2) (U) <u>Ethnic Composition</u>

    (3) (U) <u>Languages</u>

    (4) (U) <u>Social System</u>

    (5) (U) <u>Education</u>

Page number

CLASSIFICATION

CLASSIFICATION

    (6) (U) <u>Living Conditions</u>

    (7) (U) <u>Cultural Customs</u>

    (8) (U) <u>Religions</u>

    (9) (U) <u>Taboos</u>

    (10) (U) <u>Grievances</u>

    (11) (U) <u>Psychology.</u> (Behavior patterns and motivating factors.)

d. (U) <u>Transportation</u>

    (1) (U) <u>Airfields</u>

    (2) (U) <u>Helicopter Landing Zones</u>

    (3) (U) <u>Port Facilities</u>

    (4) (U) <u>Roads</u>

    (5) (U) <u>Railroads</u>

    (6) (U) <u>Inland Waterways</u>

e. (U) <u>Civilian Telecommunications and Media</u>

    (1) (U) <u>International</u>

    (2) (U) <u>Domestic</u>

    (3) (U) <u>Mass Communications Types, Capabilities, and Key Facilities</u>

        (a) (U) <u>Radio</u>

        (b) (U) <u>Television</u>

        (c) (U) <u>Print Media</u>

f. (U) <u>Politics</u>. (Address existing situation, effects on threat, HN, and military force.)

    (1) (U) <u>National Government</u>

        (a) (U) <u>Structure</u>

Page number

CLASSIFICATION

CLASSIFICATION

       (b) (U) <u>Regional and/or International Role</u>

       (c) (U) <u>Degree of Popular Support</u>

    (2) (U) <u>Political Parties.</u> (Both sanctioned and unsanctioned.)

    (3) (U) <u>Foreign Dependence or Alliances</u>

    (4) (U) <u>Controls and Restrictions</u>

    (5) (U) <u>Legal System</u>. (Civil and religious.)

    (6) (U) <u>Grievances</u>

g. (U) <u>Economics</u>. (Address existing situation, effects on threat, HN, and mission force.)

    (1) (U) <u>Current Value of Currency and Wage Scales</u>

    (2) (U) <u>Financial Structure to Include National and International</u>

    (3) (U) <u>Foreign Dependence</u>

       (a) (U) <u>Assistance Programs</u>

       (b) (U) <u>Foreign-Owned Businesses and Enterprises in Country</u>

       (c) (U) <u>Trade Agreements</u>

    (4) (U) <u>Agriculture and Domestic Food Supply</u>

    (5) (U) <u>Natural Resources and Degree of Self-Sufficiency</u>

    (6) (U) <u>Industry</u>

       (a) (U) <u>Types</u>

       (b) (U) <u>Production Levels</u>

       (c) (U) <u>Consumer Demands</u>

       (d) (U) <u>Unions</u>

    (7) (U) <u>Black Market and Illicit Trades</u>. (Drugs, weapons, etc.)

    (8) (U) <u>Technology</u>

       (a) (U) <u>Capabilities</u>

Page number

CLASSIFICATION

CLASSIFICATION

        (b) (U) <u>Expertise</u>

    h. (U) <u>Health and Medical</u>

        (1) (U) <u>Food Supply</u>

        (2) (U) <u>Water Supply</u>

        (3) (U) <u>Diseases and Other Medical Problems</u>

        (4) (U) <u>Plant and Animal Hazards</u>

        (5) (U) <u>Sanitation</u>

        (6) (U) <u>Medical Facilities</u>

3. (U) <u>Threats</u>. (For each category of threat, except medical/environmental and natural disasters, discuss organization and leadership, to include composition; strength and dispositions; recent and present significant activities, strengths and weaknesses; and relationships with other threat categories.)

    a. (U) <u>Conventional</u>

    b. (U) <u>Insurgent</u>

    c. (U) <u>Clans, Tribes, or Factions</u>

    d. (U) <u>Terrorist</u>

    e. (U) <u>Drug Producers or Traffickers</u>

    f. (U) <u>Criminal Organizations</u>

    g. (U) <u>Third-Party Nation and External</u>

    h. (U) <u>Civil Unrest</u>

    i. (U) <u>Medical and Environmental</u>

    j. (U) <u>Natural Disasters</u>

4. (U) <u>Capabilities and Analysis</u>. (List current threat capabilities and discuss in regard to probability of adoption.)

    a. (U) <u>Enumeration</u>. (Includes what, where, when, and how, for each category of threat.)

Page number

CLASSIFICATION

CLASSIFICATION

    (1) (U) <u>Basic Capabilities</u>

        (a) (U) <u>Conventional</u>

        (b) (U) <u>Insurgent</u>

        (c) (U) <u>Clans, Tribes, or Factions</u>

        (d) (U) <u>Terrorist</u>

        (e) (U) <u>Drug Producers or Traffickers</u>

        (f) (U) <u>Criminal Organizations</u>

        (g) (U) <u>Third-Party Nation and External</u>

        (h) (U) <u>Civil Unrest</u>

        (i) (U) <u>Medical and Environmental</u>

        (j) (U) <u>Natural Disasters</u>

    (2) (U) <u>Supporting Capabilities</u>. (Includes intelligence, security, recruitment, organization, training, finance, and logistics.)

        (a) (U) <u>Conventional</u>

        (b) (U) <u>Insurgent</u>

        (c) (U) <u>Clans, Tribes, or Factions</u>

        (d) (U) <u>Terrorist</u>

        (e) (U) <u>Drug Producers or Traffickers</u>

        (f) (U) <u>Criminal Organizations</u>

        (g) (U) <u>Third-Party Nation and External</u>

        (h) (U) <u>Civil Unrest</u>

        (i) (U) <u>Medical and Environmental</u>

        (j) (U) <u>Natural Disasters</u>

b. (U) <u>Analysis and Discussion</u>. (Includes evidence supporting or rejecting the adoption of each capability.)

Page number

CLASSIFICATION

CLASSIFICATION

5. (U) <u>HN Security</u>

   a. (U) <u>Situation</u>. (For each subparagraph, describe organization and leadership; strength and disposition; recent and present significant activities; and strengths and weaknesses.)

       (1) (U) <u>Public Order or Internal Security Forces</u>

       (2) (U) <u>Armed Forces</u>

       (3) (U) <u>External Support Forces and Dependency</u>. (Regional peacekeeping, foreign forces, mercenaries, etc.)

   b. (U) <u>Capabilities</u>. (What, where, when, how for basic capabilities and supporting capabilities.)

       (1) (U) <u>Public Order or Internal Security Forces</u>

       (2) (U) <u>Armed Forces</u>

       (3) (U) <u>External Support Forces and Dependency</u>

   c. (U) <u>Analysis and Discussion</u>

6. (U) <u>Friendly and Neutral Third-Party</u>

   a. (U) <u>Situation</u>. (For each subparagraph, as defined in paragraph 5.a.)

       (1) (U) <u>Embassies and Consulates</u>

       (2) (U) <u>Military</u>

       (3) (U) <u>Business Interests</u>

       (4) (U) <u>Nongovernmental Organizations (NGO) and/or Private Voluntary Organizations (PVO)</u>

   b. (U) <u>Capabilities</u>. (As defined in paragraph 5.b.)

       (1) (U) <u>Embassies and Consulates</u>

       (2) (U) <u>Military</u>

       (3) (U) <u>Business Interests</u>

CLASSIFICATION

CLASSIFICATION

      (4) (U) <u>NGO/PVO</u>

   c. (U) <u>Analysis and Discussion</u>

7. (U) <u>Conclusions and Vulnerabilities</u>

   a. (U) <u>Effects of the Operational Environment</u>. (State total effect of the area of operations upon courses of action.)

   b. (U) <u>Probable Threat Courses of Action</u>. (Listed in order of relative probability of adoption.)

   c. (U) <u>Threat Vulnerabilities</u>. (List exploitable threat vulnerabilities.)

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TABS: (as necessary)

Page number

CLASSIFICATION

APPENDIX B. WEATHER CRITICAL VALUES

Establishing weather critical values is essential to weather effects analysis on threat and friendly operations. Critical values provide the parameters for assessing the exact impact of particular weather conditions. Critical values can be established for personnel, specific types of equipment, and types of military operations and tailored to the echelon of command, the composition of the force, and the likely operations the force will be expected to conduct. For example, a MEF may be concerned with general categories such as amphibious operations, fixed-wing aviation operations, and visual reconnaissance operations. A battalion may be concerned with foot mobility, line-of-sight restrictions, and effects on indirect fire support, while an unmanned aerial vehicle unit might be more concerned with visibility, cloud cover, precipitation, and temperatures aloft. Each level of command should focus on the unit mission-essential functions and specific equipment categories.

For each category or function, only weather elements that may have an impact are listed. For example, troops operating in a desert environment (depending on the desert and time of year) are generally not affected by snowfall. Similarly, windchill is not a critical factor when assessing fixed-wing aviation operations, but windchill may affect ground crews.

For each weather element selected, critical values are established that define impact levels. In table B-1, the levels of impact are defined as favorable, marginal, and unfavorable or as unrestricted, restricted, and severely restricted. An effective technique is to assign each level a color-code, such as green, yellow, or red, that can be transferred easily to a graphic weather effects matrix.

The companion weather effects matrix lists the same functions. If a weather element falls within the unfavorable or severely restricted range, the weather effects matrix is color-coded red for that function during the period of time the unfavorable element is forecast to occur. Weather elements that result in a marginal or unfavorable assessment are noted on the weather effects matrix (see chapter 6, figure 6-3).

The MEF command element intelligence section personnel, assisted by the G-2 section's staff weather officer, the intelligence support coordinator, and intelligence battalion personnel, usually compile the weather critical values chart. The commander, operations staff, and friendly force's functional elements define selected functions, weather elements, and critical values. Within a MAGTF, for example, the air officer and aviation combat element should establish weather elements that may impact aviation operations and platforms and define the values that constitute impact levels. Within an infantry battalion, the artillery liaison officer is the best source for effects on supporting fires and artillery delivered munitions.

Regardless of who compiles the list, the commander defines weather intelligence elements that are critical to decisionmaking. The identified weather elements and their established critical values are tracked closely and serve as the basis for weather effects graphics and updates. Like other intelligence requirements, the weather elements and their critical values must be reevaluated as the mission or season changes.

Unit intelligence section personnel develop mission, type unit, and equipment-focused critical values lists during peacetime operations, to include those equipment types and units which will normally be attached or in direct support during operations. Upon receipt of an alert or execute order, these critical values lists can then be refined and tailored to the forces, mission,

and environment assigned. See MCWP 3-35.7, *MAGTF Meteorological and Oceanographic Support,* and FM 34-81-1, *Battlefield Weather Effects*, for additional doctrine and tactics, techniques, and procedures guidance.

Weather critical values are established for threat as well as friendly forces. Due to differences in weapons and personnel characteris-

tics, the same weather may have differing effects on the threat. For example, threat tanks without thermal sights will be severely restricted during periods of reduced visibility, while friendly tanks may be only marginally affected. Comparing the varying effects of weather on friendly and threat forces helps to identify advantages and vulnerabilities that may be exploited by either side.

Table B-1. Weather Critical Values Chart.

Function	Weather Element	Favorable (Unrestricted)	Marginal (Restricted)	Unfavorable (Severely Restricted)
Maneuver: Mobility (track vehicles, day)	visibility rainfall snow depth	> 1.5 km < 0.1 in/hr < 12 in	0.8 to 1.5 km > 0.5 in/hr > 12 to 20 in	< 0.8 km > 0.5 in/hr > 20 in
Maneuver: Mobility (track vehicles, night)	visibility rainfall snow depth	> 0.2 km < 0.1 in/hr < 12 in	0.1 to 0.2 km 0.1 to 0.5 in/hr 12 to 20 in	<0.1 km > 0.5 in/hr > 20 in
Maneuver: Mobility (dismounted infantry)	visibility rainfall snow depth temperature windchill	> 0.3 km < 0.1 in/hr < 3 in < 89.6 °F/32 °C > 32 °F/0 °C	0.1 to 0.3 km 0.1 to 0.5 in/hr 3 to 6 in > 89.6 °F/32 °C 32° F/0 °C to -22° F/-30° C	< 0.1 km > 0.5 in/hr > 6 in ---------- < -22 °F/-30 °C
Fire Support (155mm)	visibility ceiling surface wind snow depth	> 5.0 km > 800 ft < 35 knots < 4.0 in	1.5 to 5.0 km 500 to 800 ft 35 to 50 knots 4.0 to 6.0 in	< 1.5 km < 500 ft > 50 knots > 6 in
Fire Support (close air support)	visibility ceiling	> 8.0 km > 3000 ft	5.0 to 8.0 km 500 to 3000 ft	< 5.0 km < 500 ft
Aviation (rotary wing)	visibility ceiling surface wind precipitation	> 1.5 km > 500 ft < 20 knots none	0.4 to 1.5 km 300 to 500 ft 20 to 30 knots light	< 0.4 km < 300 ft > 30 knots freezing rain or hail
Aviation (air defense)	visibility ceiling rainfall	> 5.0 km > 5000 ft < 0.5 in/hr	3.0 to 5.0 km 3000 to 5000 ft 0.5 to 1.0 in/hr	< 3.0 km < 3000 ft > 1.0 in/hr

°C=degree Celsius °F=degree Fahrenheit ft=feet in/hr=inches per hour km=kilometer

APPENDIX C. TACTICAL INDICATORS

Indicators are any positive or negative evidence of threat activity or any characteristic of the operations area that points toward threat capabilities, vulnerabilities, or intentions. Each indicator is integrated with other factors, indicators, information, and intelligence before patterns are detected and threat intentions are established. Intelligence analysts develop indicators to—

- Assist in discerning answers to a commander's priority intelligence requirements and intelligence requirements.
- Correlate particular events or activities with probable threat courses of action.
- Determine what events or activities must occur for a threat to follow a particular course of action (COA).

As named areas of interest and the event template are developed during intelligence preparation of the battlespace (IPB), analysts develop corresponding indicators which, when detected, will assist in rapidly identifying the particular COA the threat may adopt. While some indicators may apply to most or all of the possible threat courses of action, other indicators may be unique to a particular COA. Well-developed indicator lists also aid in detecting threat deception operations. By comparing indicators, intelligence, and operations reporting, the analyst arrives at an accurate picture of the battlespace and intelligence estimates.

Indicators may be present for more than one COA in the same threat force. For example, a threat division forced to withdraw (and providing indicators accordingly) may employ a subordinate unit (brigade, regiment, or battalion) in a delaying action to cover the withdrawal. Units in contact with the delaying force may characterize the indicators as delaying in nature, but the threat force overall is withdrawing. Indicators from all sources must be analyzed to assess the threat's true intentions.

The tables on the following pages provide some intelligence indicators commonly associated with operations. These lists are intended to provide a basis from which intelligence personnel can develop indicators specific to the threat and environment they are faced with. No one indicator can stand alone; indicators must be examined within the context of the doctrine, tactics, and structure of the specific threat force.

OFFENSIVE INDICATORS

Activity	Explanation
Massing of maneuver elements, armor, artillery, and logistical support.	May strengthen the main effort by weakening areas of secondary importance.
Deployment of combat elements on a relatively narrow frontage (not forced by terrain).	May provide maximum combat power at the point of attack by reducing frontages.
Massing of indirect fire support assets.	May indicate initiation of a main attack.
Extensive artillery preparation of up to 50 minutes in duration or longer.	Indicates preparation preceding an attack.
Dispersal of tanks and self-propelled or towed artillery to forward units.	Can indicate formation of combined arms assault formations with tanks accompanying the leading maneuver elements and artillery following in bounds.
Surface-to-surface missile units located forward.	Provides depth to threat offensive operations; places friendly support and rear areas in range. May also indicate, when employed alone, harassing or special weapons delivery.
Antiaircraft artillery and mobile surface-to-air missiles located well forward with maneuver elements.	Provides increased protection to massed forces prior to attack; extends air defense umbrella forward as units advance.
Demonstrations and feints.	May precede an attack; may deceive actual point of attack.
Establishment and strengthening of counter-reconnaissance screen.	Covers assembly and preparation of forces for attack.
Concentration of mass toward one or both flanks within the forward area.	May indicate intent for single or double envelopment, particularly if massing units are armor-heavy.
Increased patrolling (ground reconnaissance).	May indicate efforts to gather detailed information regarding friendly dispositions prior to attack.
Command posts located well forward; mobile command posts identified.	Enhances command and control during offensive operations.
Movement of noncombatants out of the combat zone.	Removes noncombatants, which hinder rapid forward movement of follow-on forces.
Extensive conduct of drills and rehearsals in rear areas.	Often indicates major attacks, particularly against fortified positions or strongly defended natural or man-made barriers, which require rehearsal of specialized tactics and skills.
Increased activity in supply, maintenance, and motor transport areas.	May indicate movement of additional forces to the front to sustain major attack.
Increased aerial reconnaissance (including unmanned aerial vehicles).	Refines threat's intelligence picture prior to operations.
Establishment of forward arming and refueling points, auxiliary airfields, or activation of inactive airfields.	Increases sortie rate and turnaround time by forward basing aircraft and aviation sustainment.
Clearing lanes through own obstacles.	Facilitates forward movement and grouping of assault units, particularly at night, usually immediately precedes an attack.
Reconnaissance, marking, and destruction of opponent's obstacles.	Facilitates movement of assault echelons through opposing obstacles.
Gap-crossing equipment (e.g., swimming vehicles, bridging, ferries, boats) located in forward areas (provided there is a water or large gap obstacle).	Maintains tempo of the assault echelons when faced with significant gap obstacles, normally concentrated with main effort.
Staging of airborne, air assault, or special forces with modes of transportation/insertion.	Such elements are used to provide depth to the assault and target friendly centers of gravity.
Increased signals traffic or radio silence.	May indicate intent to conduct offensive operations. (Increased traffic may be an attempt to deceive. Radio silence denies information derived from opponent's signals intelligence.
Signals intelligence and electronic warfare assets located forward.	Provides enhanced electronic attack and electronic warfare support for assault forces.

DEFENSIVE INDICATORS

Activity	Explanation
Preparation of battalion and company defensive areas consisting of company and platoon strong points.	Indicates intent for holding terrain with defense in depth, normally supported by armored counterattack forces.
Extensive preparation of field fortifications, obstacles, and minefields.	Indicates strong positional defense.
Attachment of additional antitank assets to frontline defensive positions.	Indicates intent to contest friendly armor in forward positions, and attempts to attrite and channel friendly armor into engagement areas for armor counterattack forces.
Formation of antitank strong points in depth along avenues of approach.	May allow penetration of friendly armor into rear engagement areas.
Preparation of alternate artillery positions.	Increases survivability of artillery in the defense.
Concentration of armor units in rear area assembly areas.	Indicates holding armor units in reserve for possible counterattack or counteroffensive.
Presence of concentrated antitank reserves.	Provides quick reaction capability against armor penetrations.
Displacement of logistics and medical units towards the rear.	Facilitates maneuver defense and counterattack.
Prestocking of ammunition, supplies, and engineer or pioneer equipment in forward positions.	Reduces the burden on logistics during the battle, reduces vulnerability of interdiction of supplies, and ensures strong points can survive for reasonable periods if bypassed or cut off.
Increased depth from the forward line of troops of artillery and surface-to-surface missile units.	Allows continued employment of artillery during maneuver defense without significant rearward displacement.
Increased use of land line communications.	Implies intent to remain in position because landlines are less vulnerable to electronic warfare.
Presence of dummy positions, command posts, and weapons.	Complicates friendly targeting and analysis of actual threat locations and strengths.
Air defense more concentrated in rear areas.	Indicates location of numerous high-value targets (e.g., armor, logistics, artillery, command posts) that dictates strong air defenses in rear areas.

DELAYING INDICATORS

Activity	Explanation
Withdrawal from defensive position(s) before becoming heavily engaged.	Indicates units' delaying actions to avoid decisive engagements.
Numerous local counterattacks with limited objectives; counterattacks broken off before position is restored.	Assists in disengaging units in contact, rather than restoring positions.
Units leapfrogging to new defensive positions.	Indicates units engaging then conducting local withdrawals to new positions while another force takes up the engagement
Maximum firepower located forward; firing initiated at long ranges.	Intends to inflict casualties, slow advance, and provide sufficient combat power to avoid decisive engagement.
Extremely large unit frontages as compared to normal defense.	Indicates delaying actions to economize force, allowing larger formations to withdraw.
Chemical or biological agent weapons in forward areas.	Causes significant delays to the advancing force when employed as barriers or in minefields.
Identification of dummy positions and minefields.	Causes delays by forcing the advancing force to determine whether minefields are active or inert.

WITHDRAWAL INDICATORS

Indications of threat intent to withdraw are often the same as those for delaying actions, with the addition of the following indicators.

Activity	Explanation
Systematic destruction of bridges, communications facilities, and other assets.	Denies the advancing force the use of infrastructure and installations in withdrawal areas.
Establishment of a covering force or rear guard.	Covers the withdrawal of the main body; usually consists of a sub-element of the main force; and usually engages only the rear guard element.
Increased rearward movement noted at night, particularly during inclement weather.	Attempts to withdraw units under the concealment of darkness and weather.
Minimal presence of logistic and medical units. Destruction of dumps and depots.	Indicates withdrawal of nonessential logistic and medical elements and the inability to move depots and dumps.
Establishing and marking withdrawal routes and traffic control points.	Facilitates the rapid movement of forces rearward.
Preparation of new defensive positions beyond supporting range of present positions.	Indicates attempt to establish new positions along suitable terrain prior to the arrival of deliberately withdrawn forces.
Increased engineer activity and stockpiling of explosives in the threat rear area near bridges, tunnels, built-up areas, etc.	Facilitates maintenance of lines of communications for own forces; indicates demolition of infrastructure in front of opposing force.
Rearward movement of long-range artillery.	Positions long-range artillery before withdrawal takes place.
Activation of command posts well removed (beyond doctrinal norms) from the present battle area.	Creates command and control nodes in the new position or assembly area to command and control arriving forces.

MILITARY OPERATIONS OTHER THAN WAR INDICATORS

Given the wide range of military operations other than war (MOOTW), the possible indicators of various activities can be enormous. However, most MOOTW evolutions still involve the requirement to identify risks to friendly forces. By their nature, MOOTW are generally concerned with indigenous populations, regardless of the nature of the mission. The following indicators focus on those indicators associated with possible threats emerging from indigenous populations. These lists provide the analyst with a point of departure for developing case specific indicators.

THREAT POPULATION INDICATORS

General Activities
Identification of agitators, insurgents, militias or criminal organizations, their supporters, and sympathizers who suddenly appear in, or move out of, an area.
New faces in a rural community.
Unusual gatherings among the population.
Disruption of normal social patterns.
Mass urban rural migration or vice versa.
Massing of combatants of competing power groups.
Increase in the size of embassy or consulate staffs from a country or countries which support indigenous disaffected groups, particularly those hostile to the United States and/or the current intervention.
Increase in neighboring countries of staff and activities at embassies or consulates of countries associated with supporting indigenous disaffected groups.
Increased travel by suspected subversives or leaders of competing power bases to countries hostile to the United States or opposed to the current intervention.
Influx of opposition resident and expatriate leaders into the operations area.
Reports of opposition or disaffected indigenous population receiving military training in foreign countries.
Increase of visitors (e.g., tourists, technicians, businessmen, religious leaders, officials) from groups or countries hostile to the United States or opposed to the current intervention.
Close connections between diplomatic personnel of hostile countries and local opposition groups.
Communications between opposition groups and external supporters.
Increase of disaffected youth gatherings.
Establishment of organizations of unexplained origin and with unclear or nebulous aims.
Establishment of a new organization to replace an existing organizational structure with identical aims.
Appearance of many new members in existing organizations such as labor unions.
Infiltration of student organizations by known agitators.
Appearance of new organizations stressing grievances or interests of repressed or minority groups.
Reports of large donations to new or revamped organizations.
Reports of payment to locals for engaging in subversive of hostile activities.
Reports of the formation of opposition paramilitary or militia organizations.
Reports of lists of targets for planned opposition attacks.
Appearance of "professional" agitators in gatherings or demonstrations that result in violence.
Evidence of paid and armed demonstrators' participation in riots.
Significant increase in thefts, armed robberies, and violent crime in rural areas; increase in bank robberies in urban areas.

Opposition-Directed Activities
Refusal of population to pay or unusual difficulty to collect rent, taxes, or loan payments.
Trends of demonstrated hostility toward government forces and/or mission force.
Unexplained population disappearance from or avoidance of certain areas.
Unexplained disappearance or dislocation of young people.
Reported incidents of attempted recruitment to join new movements or underground organizations.
Criminals and disaffected youth who appear to be acting with and for the opposition.
Reports of extortion and other coercion by opposition elements to obtain financial support from the population.
Use of fear tactics to coerce, control, or influence the local population.
Reports of host nation government and/or mission force facilities and personnel surveillance.
Activities Directed Against the Government/Mission Force
Failure of police and informer nets to report accurate information, which may indicate sources are actively supporting opposition elements or are intimidated.
Decreasing success of government law enforcement or military infiltration of opposition or disaffected organizations.
Assassination or disappearance of government sources.
Reports of attempts to bribe or blackmail government officials, law enforcement employees, or mission personnel.
Reports of attempts to obtain classified information from government officials, government offices, or mission personnel.
Classified information leaked to the media.
Sudden affluence of certain government and law enforcement personnel.
Recurring failure of government or mission force raids on suspected opposition organizations or illegal activities apparently due to forewarning.
Increased hostile or illegal activity against the government, its law enforcement and military organizations, foreigners, minority groups, and/or competing political, ethnic, linguistic, or religious groups.
Demonstrations against government forces, minority groups, or foreigners designed to instigate violent confrontations with government or mission forces.
Increased antigovernment or mission force rhetoric in local media.
Occurrence of strikes in critical areas intended to cast doubt on the government's ability to maintain order and provide for the people.
Unexplained loss, destruction, or forgery of government identification cards and passports.
Recurring unexplained disruption of public utilities.
Reports of terrorist acts or extortion attempts against local government leaders and businessmen.
Murder or kidnapping of government, military, and law enforcement officials or mission force personnel.
Closing of schools.

PROPAGANDA INDICATORS

General Propaganda Activities
Dissident propaganda from unidentified sources.
Increase in the number of entertainers with a political message.
Increase of political themes in religious services.
Increase in appeals directed at intensifying general ethnic or religious unrest in countries where ethnic or religious competition exists.
Increase of agitation on issues for which there is no identified movement or organization.
Renewed activity by dissident or opposition organizations thought to be defunct or dormant.
Circulation of petitions advocating opposition or dissident demands.
Appearance of opposition slogans and pronouncements by word-of-mouth, graffiti, posters, leaflets, etc.
Propaganda linking local ethnic groups with those in neighboring countries or regions.
Clandestine radio broadcasts intended to appeal to those with special grievances or to underprivileged ethnic groups.
Use of bullhorns, truck-mounted loudspeakers, and other public address equipment in "spontaneous" demonstrations.
Presence of nonmedia photographers among demonstrators.
Rallies to honor "martyred" opposition personnel. Mass demonstrations honoring local dissident heroes or dates significant to the opposition.
Nationwide strikes called to demonstrate the strength of the opposition movement(s).
Propaganda Activities Directed Against the Established Government
Attempts to discredit or ridicule national or public officials.
Attempts to discredit the judicial and law enforcement system.
Characterization of government leaders as puppets and tools of foreign intervention forces.
Agitation against government projects and plans.
Radio propaganda from foreign countries that is aimed at the target country's population and accuses the target country's government of failure to meet the people's needs.
Propaganda Activities Directed Against the Mission Force and Host Nation Military and Law Enforcement
Spreading accusations that the host nation military and police are corrupt and out of touch with the people.
Spreading accusations that mission force personnel will introduce customs or attitudes that are in opposition to local cultural or religious beliefs.
Character assassinations of mission, military, and law enforcement officials.
Demands to remove strong anti-opposition or anticrime military and law enforcement leaders from office.
Calls for the population to cease cooperating with the mission force and/or host nation military and law enforcement.
Deliberate incidents to provoke mission, military, or police reprisals during demonstrations or strikes.
Widespread hostile media coverage of even minor criminal violations or incidents involving mission force personnel.
Accusations of brutality or ineffectiveness or claims that mission or government forces initiated violence following confrontations.
Publication of photographs portraying repressive and violent acts by mission force or government forces.
Refusal of businessmen and shop owners to conduct business with mission force personnel.

Propaganda Activities Directed Against the Education System
Appearance of questionable doctrine and teachings in the educational system.
Creation of ethnic, tribal, religious, or other interest group schools outside the government educational system, which propagate opposition themes and teachings.
Charges that the educational system is only training youth to do the government's bidding.
Student unrest manifested by new organizations, proclamations, demonstrations, and strikes against authority.

COMMODITIES INDICATORS

Food-Related Activities
Diversion of crops or meat from markets.
Unexplained shortages of food supplies when there are no reports of natural causes.
Increased reports of foodstuffs pilfering.
Sudden increase in food prices, possibly indicating an opposition-levied tax.
Unwillingness of farmers to transport food to population centers, indicating a fear of traveling highways.
Spot shortages of foodstuffs in regions or neighborhoods associated with a minority group or weaker competing interest group, while food supplies are generally plentiful in other areas. Conversely, sudden local shortages of foodstuffs in rural areas may indicate the existence of an armed opposition group operating in that region.
Sudden increase of meat in markets, possibly indicating slaughtered livestock because of a lack of fodder to sustain them.
Appearance of emergency relief supplies for sale in black markets, possibly indicating diversion from starving population.
Appearance of relief supplies for sale in normal markets in a country or region recently suffering from large-scale hunger, which may indicate the severity of the food crisis is diminishing.
Arms and Ammunition-Related Activities
Increased loss or theft of weapons from military and police forces.
Discovery of arms, ammunition, and explosives being clandestinely manufactured, transported, or cached.
Attacks on patrols resulting in the loss of weapons and ammunition.
Increased purchase of surplus military goods.
Sudden increase in prices for arms and ammunition on the open market.
Reports of large arms shipments destined for neighboring countries, but not intended for that government.
Reports of known arms traffickers establishing contacts with opposition elements.
Increase in armed robberies.
Reports of thefts or sudden shortages of chemicals, which could be used in the clandestine manufacture of explosives.
Reports of large open-market purchases of explosives-related chemicals without an identifiable industrial user.
Appearance of manufactured or smuggled arms from noncontiguous foreign countries.
Clothing-Related Activities
Unusual, systematic purchase or theft of clothing materials, which could be used for the manufacture of uniforms or footwear.
Unusual scarcity of clothing or material used in the manufacture of clothing or footwear.
Distribution of clothing to underprivileged or minority classes by organizations of recent or suspect origin.
Discovery of caches of uniforms and footwear or the materials which could be used to manufacture uniforms and footwear.
Increase of males in the streets wearing military style clothing or distinctive markings.

Medicine-Related Activities
Large-scale purchasing or theft of drugs and medicines or the herbs used to manufacture local remedies.
Scarcity of drugs and medical supplies on the open or black markets.
Diversion of medical aid donations.
Discovery of caches of medical supplies.
Communications-Related Activities
Increase in the purchase and use of radios.
Discovery of caches of communications equipment.
Unusual increase in amateur radio or cellular telephone communications traffic.

ENVIRONMENT-RELATED INDICATORS

Rural Activities
Evidence of increased foot traffic in the area.
Increased travel within and into remote or isolated areas.
Unexplained trails and cold campsites.
Establishment of new, unexplained agricultural areas, or recently cleared fields.
Unusual smoke, possibly indicating the presence of a campsite or a form of communication.
Concentration of dead foliage in an area, possibly indicating use of camouflage.
Presence of foot traps, spikes, boobytraps, or improvised mines along routes and trails.
Urban Activities
Apartments, houses, or buildings being rented, but not lived in as homes.
Slogans written on walls, bridges, and streets.
Defacement of government and mission force information signs.
Sabotage of electrical power network; pollution of urban area's water supply.
Terrorist acts against physical targets such as bridges, dams, airfields, or buildings.
Change of residence of suspected agitators or opposition leaders.
Discovery of message dead-drops.
Increased smuggling of currency, gold, gems, narcotics, medical supplies, and arms into urban centers.
Appearance of abnormal amounts of counterfeit currency.
Increase in bank robberies.
Work stoppages or slowdowns in essential industries.
Marked decline in product quality in essential industries.
Marked increase in equipment failures in essential industries.
Unexplained explosions in essential utilities and industries.
Establishment of roadblocks or barricades around neighborhoods associated with opposition elements.
Attempts to disrupt public transport through sabotage.
Malicious damage to industrial products or factory machinery.

APPENDIX D. BATTLE DAMAGE ASSESSMENT REPORT FORMAT

The periodic summary battle damage assessment (BDA) report on page D-2 is an example format that may be used by MEF major subordinate command intelligence personnel to provide consolidated Phase I BDA, physical damage assessment, to the intelligence battalion's production and analysis cell. The report is a compilation of BDA reporting from subordinate elements as well as BDA obtained at the MSC level during the designated time period. The theater intelligence tactics, techniques, and procedures or the joint task force commander establishes BDA reporting formats for the joint task force, theater, and national level.

Normally, the aviation combat element is responsible for providing BDA on any air tasking order-related missions, while the ground combat element focuses on their subordinate elements' engagement results, to include observed close air support effects.

The target intelligence and BDA team, production and analysis company, intelligence battalion, is responsible for—

- Consolidating, deconflicting, and refining BDA reports.

- Introducing additional information and intelligence obtained from other sources.

- Preparing the Phase I BDA, physical damage assessment, for the MEF commander.

- Preparing Phase II BDA, functional damage assessment, based on the consolidated reporting from subordinate, higher, and adjacent commands.

- Adjusting the MEF order of battle data bases to reflect combat losses.

- Developing the combat strength assessment for each unit.

BATTLE DAMAGE ASSESSMENT REPORT FORMAT EXAMPLE

SUBJECT: 6 HR BDA REPORT (SUBMIT TO INTELLIGENCE BATTALION'S TARGET INTELLIGENCE/ BDA TEAM, P&A CELL, AT SPECIFIED TIMES.)

REPORTING UNIT:

REPORTING PERIOD: (FROM/TO)

ENEMY UNIT OR FACILITY #1: (DOWN TO BDE NAME FOR MANEUVER, BN FOR FIRE SUPPORT, OR AS DIRECTED IN UNIT SOP OR OPORD. REPEAT THIS SECTION FOR EACH UNIT OR FACILITY.)

UIC OR BE#: DHGKNXXXXX

DAMAGED/DESTROYED:

LOC	TYPE	#DEST	#DMGD/EXTENT

1. ARMOR:

2. FIRE SUPPORT:

3. TRUCKS:

4. AIR DEFENSE:

5. C2 SYSTEMS:

6. MOB/CNTRMOB: (ENGINEERS ASSETS, BRIDGES, LINES OF COMMUNICATIONS, MINES, ETC.)

7. CSS:

LOC	WIA	KIA

8. PERSONNEL:

REMARKS:

IF UNIT NAME IS UNKNOWN, INCLUDE TIME OF REPORT (TOR), UNDER HEADING "ENEMY UNIT: UNKNOWN". DO NOT SUMMARIZE; LIST EACH REPORT. FOR EXAMPLE:

ENEMY UNIT: UNKNOWN

UIC: UNKNOWN

DAMAGED/DESTROYED: LIST ALL UNKNOWN UNIT BDA REPORTS BY TIME

TOR*	LOC	TYPE	#DEST	#DMGD/EXTENT

1. ARMOR:

2. FIRE SUPPORT:

3. TRUCKS:

4. AIR DEFENSE:

5. C2 SYSTEMS:

6. MOB/CNTRMOB: (ENGINEERS ASSETS, BRIDGES, LINES OF COMMUNICATIONS, MINES, ETC.)

7. CSS:

TOR*	LOC	WIA	KIA	EPW

8. PERSONNEL:

REMARKS: *TOR: TIME OF REPORT. (NOTE: REMARKS ARE A MEANS OF REPORTING INFORMATION THAT DOES NOT FIT INTO THE TABLES DESCRIBED ABOVE. SPELL IT OUT IN A REMARKS SECTION, FOR EACH UNIT IF NECESSARY OR IF YOUR ASSESSMENT GOES BEYOND NUMBER COUNTS.)

APPENDIX E. MAGTF INTELLIGENCE PRODUCTION PLAN FORMAT

Tab B (Intelligence Production Plan) to Appendix 16 (Intelligence Operations Plan) to Annex B (Intelligence) should explain how intelligence production elements under the command or supporting the MAGTF would be used to support this plan. Additionally, it provides basic guidance and direction to subordinate commanders and intelligence officers for the conduct of MAGTF intelligence production operations and the support of intelligence elements and personnel identified to fulfill the intelligence requirements (IRs) in support of this plan.

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TAB B TO APPENDIX 16 (INTELLIGENCE OPERATIONS PLAN) TO ANNEX B (INTELLIGENCE) TO OPERATION ORDER (Number) (Operation CODEWORD) (U)
INTELLIGENCE PRODUCTION PLAN (U)

(U) REFERENCES: (The annex B originator must ensure that all receiving units and executing units have cited references.)
(a) Unit standing operating procedures (SOP) for intelligence, counterintelligence, reconnaissance, and others as appropriate.
(b) Joint task force, naval task force, other components, theater and national intelligence plans, orders and tactics, techniques, and procedures; and multinational agreements pertinent to intelligence operations.
(c) Documents, products, and online intelligence data bases that provide intelligence required for planning.
(d) Appropriate Marine Corps, naval, joint, and other doctrine publications.
(e) Others as appropriate.

(U) Time Zone: Zulu

1. (U) <u>Situation</u>. (May refer to Appendix 11 [Intelligence Estimate] as appropriate.)

    a. (U) <u>Definition of the Area of Operations and Area of Interest</u>. (Describe the limits of the area of operations [AO] and area of interest [AOI]. Summarize pertinent

Page number

CLASSIFICATION

CLASSIFICATION

weather, terrain, and other area characteristics and conditions that may influence MAGTF production operations.)

b. (U) Enemy. (Refer to annex B and current intelligence estimates for threat capabilities, limitations, vulnerabilities, and order of battle pertinent to intelligence production operations.)

c. (U) Assigned MAGTF Organic and Supporting Production Assets. (Identify organic and supporting forces available to perform intelligence production and related functions.)

d. (U) Facts and Assumptions. (State facts and assumptions derived during the mission analysis step of the Marine Corps Planning Process.)

e. (U) MAGTF Intelligence Production Considerations. (List key production and intelligence or other considerations, which impact this operation plan [OPLAN] or contingency plan [CONPLAN].)

    (1) (U) Current Priority Intelligence Requirements (PIRs), Unit Concept of Operations, Unit Main Effort's PIRs, and Other Commander's Guidance

    (2) (U) Availability of Intelligence

    (3) (U) Intelligence Production Support to and from Joint Task Force (JTF) and Other Component Headquarters

    (4) (U) Subordinate Units' Production Capabilities and Needs. (Include necessary establishment and manning of forward production elements.)

2. (U) Mission. (State concisely the MAGTF intelligence production mission as it relates to the command's planned operation.)

3. (U) Execution

a. (U) Concept of Operations. (Reference the unit's intelligence SOP and the basic Appendix 16 to Annex B. Restate as appropriate the commander's intent and pertinent aspects of the unit's overall concept of operations as they relate to production operations. Outline the purpose and concept of MAGTF production operations and specified priorities. Summarize the means and agencies to be employed in planning and directing, collection, processing and exploiting, analyzing and producing, disseminating, and using intelligence during execution of the operation order [OPORD]. Address the integration of JTF, other components, theater, national, and allied forces' production operations.)

Page number

CLASSIFICATION

CLASSIFICATION

b. (U) <u>Tasks for Production and Related Units and Organizations, Subordinate Units, and Task Force Commanders or Officers in Charge (OICs)</u>

(1) (U) <u>Orders to Subordinate, Attached, and Supporting Units</u>. (Use separate numbered subparagraphs to list detailed instructions for each unit conducting production operations, including the originating headquarters, subordinate commands, and separate intelligence support units with critical support to production roles. Some or all of the below units and sections may be addressed here; specific major subordinate commands [MSCs] and other intelligence producers will be tasked according to the unit SOP and mission, enemy, terrain and weather, troops and support available, and time available [METT-T].)

(a) (U) <u>Major Subordinate Commanders</u>

(b) (U) <u>Commanding Officer, Intelligence Battalion</u>

<u>1</u>   (U) <u>OIC, Support Cell</u>

<u>2</u>   (U) <u>OIC, Production and Analysis (P&A) Cell</u>

<u>a</u>   (U) <u>Analysis Teams</u>

<u>b</u>   (U) <u>Order of Battle Teams</u>

<u>c</u>   (U) <u>Target Analysis and Battle Damage Assessment Teams</u>

<u>d</u>   (U) <u>Intelligence Preparation of the Battlespace Teams</u>

<u>e</u>   (U) <u>Platoon Commander, Imagery Intelligence Platoon</u>

<u>f</u>   (U) <u>Platoon Commander, Topographic Platoon</u>

<u>g</u>   (U) <u>Staff Noncommissioned OICs, Direct Support Teams</u>

<u>h</u>   (U) <u>Weather Analysis Element</u> (if assigned)

<u>3</u>   (U) <u>OIC, Surveillance and Reconnaissance Cell</u>

<u>4</u>   (U) <u>Commanding Officer, Counterintelligence (CI)/Human Intelligence (HUMINT) Company</u>

(c) (U) <u>Commanding Officer, Radio Battalion</u>

(d) (U) <u>Commanding Officer, Force Reconnaissance Company</u>

(e) (U) <u>Commanding Officer, Marine Unmanned Aerial Vehicle Squadron (VMU)</u>

Page number

CLASSIFICATION

CLASSIFICATION

  (f) (U) <u>Commanding Officer, Marine Tactical Electronic Warfare Squadron (VMAQ)</u>

  (g) (U) <u>Commander, Marine Corps Imagery Support Unit</u> (if tasked to provide support to the MAGTF)

  (h) (U) <u>Others</u> (as appropriate)

 (2) (U) <u>Requests to Higher, Adjacent, and Cooperating Units</u>. Provide separate numbered subparagraphs pertaining to each unit not organic, attached, or supporting from which production support is requested, including other components, JTF headquarters, allied or coalition forces, as well as theater and national operational and intelligence elements.

c. (U) <u>Coordinating Instructions</u>. (Reference Appendix 16, and command and other pertinent forces and organizations intelligence SOPs. Detail here or in supporting enclosures, key changes to SOPs. Include or emphasize additional topics [e.g., requesting production support; intelligence production requirement [IPR] numbering and other management issues; direct liaison among subordinate commanders and production elements' leaders, staff officers, and pertinent external organizations and agencies; routine and time-sensitive reporting procedures and formats; releasability to non-U.S. military organizations; security guidance].)

4. (U) <u>Administration and Logistics</u>

a. (U) <u>Logistics</u>. Reference Annex D (Logistics). (Identify production-unique logistic requirements and concerns [e.g., unique combat service support requirements, procedures, and other guidance to support MAGTF production units and operations; or procedures for specialized technical logistic support necessary from external organizations].)

b. (U) <u>Personnel</u>. (Identify unique production personnel requirements and concerns [e.g., critical personnel shortages, global sourcing requirements, security clearance issues, contractor support].)

5. (U) <u>Command and Control</u>

a. (U) <u>Command Relationships</u>. Reference Annex J (Command Relationships). (Provide necessary instructions regarding MAGTF command relationships that will influence production operations.)

Page number

CLASSIFICATION

CLASSIFICATION

b. (U) <u>Information Management</u>. Reference Annex U (Information Management), Annex C (Operations), Appendix 16, and Tab C (Intelligence Dissemination Plan) to Appendix 16. (Provide any instructions necessary regarding information management [e.g., time-sensitive and routine reporting criteria, intelligence data base administration and authorities, periodic production status reporting from production elements, reports formats and changes] that will influence MAGTF production operations.

c. (U) <u>Communications and Information Systems</u>. Reference Appendix 16 and Annex K (Communications and Information Systems). (Provide any instructions necessary regarding communications and information systems [CIS] that will influence MAGTF production operations and its effective integration with MAGTF collection and dissemination operations.

d. (U) <u>Intelligence Command and Control Nodes and Facilities</u>. Reference the unit's intelligence SOP and Appendix 16. Provide necessary guidance and instructions regarding the establishment, relationships, and operations of MAGTF intelligence production nodes and facilities (e.g., P&A cell, the radio battalion operations control and analysis center, CI/HUMINT company command post).

ACKNOWLEDGE RECEIPT

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Title

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ENCLOSURES:

1–Intelligence Production Matrix
2–Periodic Intelligence Production Status Report Instructions and Format

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INTELLIGENCE PRODUCTION MATRIX
INSTRUCTIONS AND FORMAT

The intelligence production matrix is a tool used by MAGTF intelligence officers, the intelligence support coordinator (ISC), and production leaders to effectively plan, direct, and manage intelligence production operations. Making the matrix accessible to subordinate units' intelligence officers and intelligence producers will improve overall collaborative intelligence planning and execution.

The sample below is one format for the intelligence production matrix. The unit specifies the particular format for a given operation. The complexity of the operation and other METT-T factors will determine which format is used.

PIR, IR, or IPR Number	Date Requested	Production Requirement	Event/ Operation/ Exercise	Requesting Unit/POC	Tasked Unit(s)	Tasked Unit(s) POC	Due Date or DTG	First Review Date or DTG	First Review Remarks	Second Review Date or DTG	Second Review Remarks

Third Review Date or DTG	Third Review Remarks	Status	Feedback	Estimated Man-Hours	Actual Man-Hours*	Estimated Cost*	Actual Cost*	Quality and Distribution	Distribution Follow-ups & New IRs/ IPRs	Additional Remarks
*Garrison use only										

PERIODIC INTELLIGENCE PRODUCTION STATUS REPORT
INSTRUCTIONS AND FORMAT

The periodic intelligence production status report is used by designated MAGTF units with all-source or other significant intelligence production capabilities to keep commanders, intelligence officers and sections, and other staff elements apprised of the status of current and future intelligence production operations. For the effective management of unit production activities, intelligence officers or their production leaders may require that this report be used by designated production elements under their staff cognizance to report their production status.

The example report on page E-8 is only one format (refer to the unit's SOP for specific format and direction). Normally, variations of the SOP format will be established for text, voice, and record message traffic purposes. Changes for a particular operation will be clearly identified in Annex B.

The unit SOP or Annex B also establishes the timeframe covered by each report and identifies routine and nonroutine recipients. The report may be disseminated by various methods. Interim reports, when required, generally will be disseminated via either briefings or via the tactical data network (TDN). Principal dissemination methods for the production status report include—

- Intelligence section's homepage on the MAGTF SECRET-TDN (S-TDN), with necessary sensitive compartmented information (SCI) production status posted on the SCI-TDN intelligence section homepage.
- Stand-alone record message.
- Production data bases accessible via the S-TDN or SCI-TDN (or SECRET Internet Protocol Router Network [SIPRNET] and Joint Worldwide Intelligence Communications System [JWICS] for external commands).
- Separate paragraph within the daily intelligence summary.

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Date/time group
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ENCLOSURE 2 TO TAB B TO APPENDIX 16 TO ANNEX B TO OPERATION
ORDER (NUMBER) (OPERATION CODEWORD) (U)
PERIODIC INTELLIGENCE PRODUCTION STATUS REPORT INSTRUCTIONS
AND FORMAT (U)

Subj: MEF PERIODIC INTELLIGENCE PRODUCTION STATUS REPORT FOR THE
PERIOD 180001Z–182359Z NOV 99

1. (U) Production Operations Status. (Provide essential details to ensure supported
commanders, intelligence officers, and other planners are apprised of the current status of
key intelligence production operations. At a minimum, PIRs and IPR priorities should be
included.)

    a. (U) PIR/IR MEF 01-99

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MEF 01-99	intelligence estimate	III MEF CG and staff; copies to MSCs	031457Z NOV 99	2100001Z NOV 99

    (1) (U) Task Production Element(s). P&A cell and assistance from radio
    battalion operations control and analysis center, CI/HUMINT company and
    Marine Corps Imagery Support Unit (MCISU) as directed by ISC.

    (2) (U) Remarks. Production in support of contingency planning. Final product
    is the initial Appendix 11 (Intelligence Estimate) with supporting CI estimate.
    Product is 95 percent complete.

Page number

CLASSIFICATION

CLASSIFICATION

b. (U) <u>PIR/IR MEF 002-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MEF 002-99; Division 002-99, MAW 003-99, and FSSG 002-99 relate	OPLAN Support	III MEF G-2/3/5; copies to MSCs	031645Z NOV 99	230700Z NOV 99

(1) (U) <u>Task Production Element(s)</u>. MEF lead P&A cell developing, in coordination with JFT joint intelligence support element (JISE) and the joint force land component commander intelligence section.

(2) (U) <u>Remarks</u>. Production in support of contingency planning. (Provide template locations and dispositions of estimated enemy command and control [C2] headquarters, maneuver, and logistic elements down to the brigade and regiment level, and fires elements down to battalion level, in support of the five locations specified to support MEF course of action development.) Product is currently in work. Current intelligence is available on the MEF G-2 SCI-TDN homepage. Spreadsheet will be forwarded to staff sections and MSCs upon completion.

c. (U) <u>MEF 003-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MEF 003-99	expeditionary support product (phase 1)	Originator, III MEF G-2/3/4/5/6; copies to Division, FSSG, MAW	062207Z NOV 99	240700Z NOV 99

(1) (U) <u>Task Production Element(s)</u>. P&A cell; imagery intelligence platoon (IIP), topographic platoon, and MCISU assist as directed.

(2) (U) <u>Remarks</u>. Expeditionary support product in support of phase 1 scheme of maneuver and course of action analysis. Product is 75 percent complete. Completed helicopter landing zone study, which is posted on MEF G-2 S-TDN homepage. Targets within G-2 designated priority areas are 95 percent scanned.

CLASSIFICATION

d. (U) <u>PIR/IR Division 005-00</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
Division 005-99	map update and reproduction	Division; copy to FSSG	080423Z NOV 99	Initial 10, 140100Z NOV 99; remainder, 270001Z NOV 99

(1) (U) <u>Task Production Element(s)</u>. Topographic platoon lead; IIP assist as required.

(2) (U) <u>Remarks</u>. Production in support of division planning and C2. Integrating current geographic intelligence (GEOINT) products with current external imagery in order to update 1993 edition maps. Initial distribution requirement made; remainder 85 percent complete. Anticipate full IR satisfaction by 230001Z NOV 99.

e. (U) <u>PIR/IR MAW 003-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MAW 003-99	CIB graphics	1st MAW G-2; Division, MEF G-5 and FFC	101457Z NOV 99	011000Z DEC 99

(1) (U) <u>Task Production Element(s)</u>. IIP assisted by P&A cell, red team, and force fires cell (FFC) future operations personnel as required.

(2) (U) <u>Remarks</u>. Production to support MAW target development and planning. Produce kill boxes using controlled image base (CIB) imagery. Product will be a 5-meter CIB overview of indicated areas, including a graphic reference grid with kill boxes annotated. Product is 80 percent completed.

f. (U) <u>PIR/IR Division 007-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
Division 007-99; FSSG 004-99	LOC study	Division G-2; III MEF G2, FSSG	120937Z NOV 99	140200Z DEC 99

CLASSIFICATION

CLASSIFICATION

(1) (U) <u>Task Production Element</u>. Topographic platoon assisted by IIP and P&A cell.

(2) (U) <u>Remarks</u>. Production in support of wargaming and planning. Produce a detailed lines of communications (LOC) intelligence study. Product must maintain a classification level of unclassified. The bridge portion of this product can only be completed 45 percent due to lack of data sets and imagery.

g. (U) <u>PIR/IR MEF 010-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MEF 010-99; Division 009-99	target area/objective studies	MEF G-3 and FFC; Division and MAW	072103Z DEC 99	100400Z DEC 99

(1) (U) <u>Task Production Element(s)</u>. P&A cell; IIP and topographic platoon support as required.

(2) (U) <u>Remarks</u>. Production of imagery products and supporting all-source intelligence reports for six specified areas within the division's area of operations. Production is completed; final dissemination ongoing and will be completed by 191000Z Nov 99. Follow-up conference call between MEF G-3/G-2 (P&A cell lead), division G-3/G-2 and MAW G-3/G-2 to verify fully satisfied IR and new IRs scheduled for 191600Z Nov 99.

h. (U) <u>PIR/IR FSSG 016-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
FSSG 016-99	elevation/slope tint	FSSG; Division	130303Z NOV 99	050600Z DEC 99

(1) (U) <u>Task Production Element</u>. Topographic platoon.

Page number

CLASSIFICATION

CLASSIFICATION

(2) (U) <u>Remarks</u>. Production in support of FSSG site locations assessments and rear area security planning. Produce elevation and slope tint at 1:50,000 scale for defined areas. Slope tint will be provided in place of comprehensive cross-country movement study for two areas because there is no terrain data; possible new information from yesterday's JTF imagery collection missions. Product is 80 percent complete.

i. (U) <u>PIR/IR MEF 012-99</u>

PIR/IR #	Intelligence Product	Requester; Other Recipients	Date Received	Latest Time Information of Value
MEF 012-99	enemy C2 and CIS template	MEF G-5/G-3; MAW and Division	071457Z DEC 99	140100Z DEC 99

(1) (U) <u>Task Production Element(s)</u>. Radio battalion operations control and analysis center; P&A cell, MAW G-2, and VMAQ tactical electronic reconnaissance processing and evaluation system assist as required.

(2) (U) <u>Remarks</u>. Production in support of MEF C2 warfare and targeting planning. Provide template locations and dispositions of estimated enemy C2 headquarters, maneuver, and logistic elements down to the brigade and regiment level, and fires elements down to battalion level, with estimated key CIS emitters in support of the five locations specified to support MEF COA development and wargaming. IR modified 071800Z DEC 99 to incorporate specified enemy radars and other noncommunications emitters to support MAW suppression of enemy air defenses planning. Product is 75 percent complete. Final product dissemination will be restricted to U.S. and designated multinational intelligence and operations elements.

2. (U) <u>Production Problems</u>. (Identify and describe significant production problems [e.g., anticipated delays meeting the latest times information of value for validated PIRs and higher priority IRs; CIS difficulties; releasability issues].)

Page number

CLASSIFICATION

CLASSIFICATION

3. (U) <u>Production Detachments</u>. (In initial report, identify intelligence detachments in support of MAGTF subordinate units that have a production capability. In subsequent reports, identify detachment name and annotate "NO CHANGE," if applicable, and new detachments deployed since the last status report. Other supporting information will be according to unit SOP and may include: period of support; detachment's intelligence support purpose; personnel and military occupational specialty information; anticipated near-term detachments support.)

Who	Dates/Period	Supported Unit	Purpose
Intelligence Battalion 1-99 (P&A cell)	01 Nov 00–(to be determined)	JTF J-2/ JISE	one 0202, two 0231s, and one 0241 for liaison and targeting support
Intelligence Battalion 2-99 (P&A Company, Direct Support Team #1)	10 Nov 99–(to be determined)	Division G-2	MEF main effort support
Intelligence Battalion 3-99 (P&A Company, Direct Support Team #2)	15 Nov 00–(to be determined)	FSSG G-2	rear area security support
Intelligence Battalion 4-99 (HUMINT Support Team #1)	19 Nov 99–(to be determined)	Division G-2	CI force protection support
Intelligence Battalion 5-99 (HUMINT Support Team #2)	22 Nov 99–(to be determined)	FSSG G-2	CI force protection support
Intelligence Battalion 6-99 (HUMINT Support Team #3)	22 Nov 99–(to be determined)	MAW G-2	CI force protection support
Intelligence Battalion 7-99 (Topographic Platoon, Geographic Intelligence Support Team #1)	19 Nov 99–(to be determined)	Division G-2	GEOINT support
Intelligence Battalion 8-99 (Topographic Platoon, Geographic Intelligence Support Team #2)	1 Dec 99–(to be determined)	FSSG G-2	GEOINT support
Radio Company Command Element (Signals Support Unit lead echelon element)	1 Dec 99–(to be determined)	Division G-2	Signals Intelligence support
Intelligence Battalion 9-99 (Topographic Platoon, Geographic Intelligence Support Team #3)	5 Dec 99–(to be determined)	MAW G-2	GEOINT support

Page number

CLASSIFICATION

CLASSIFICATION

4. (U) <u>Miscellaneous</u>. (Detail other information pertinent to ongoing collaborative intelligence production planning, direction, and operations. This may include items such as anticipated CIS problems, intelligence data base changes, nonscheduled cells or other intelligence briefings, critical intelligence collection and production issues, key external intelligence production items, security, and
dissemination issues.)

ACKNOWLEDGE RECEIPT

<div align="right">

Name
Rank and Service
Title

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OFFICIAL:
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NAME
Rank and Service
Title

CLASSIFICATION

APPENDIX F. INTELLIGENCE SUMMARY FORMAT

The intelligence summary (INTSUM) provides a synopsis of the reporting unit's intelligence situation covering a specified period of time. It is used to report threat activities, changes to threat capabilities, and results of further collections, analysis, and production to higher, adjacent, and subordinate forces. The INTSUM updates the current intelligence estimate and provides a continual intelligence assessment of threat actions and estimated capabilities and courses of action.

The theater intelligence directorate (J-2) provides guidance on INTSUM reporting periods and submission deadlines. Theater tactics, techniques, and procedures (TTP) and the specific operations plan or operation order (OPORD) designate INTSUM reporting requirements for subordinate joint task forces (JTFs) or Service and functional components. Based on those requirements, MAGTF intelligence officers (G-2/S-2) establish INTSUM reporting requirements for their major subordinate commands (MSCs) or elements; at the MEF CE level, the intelligence support coordinator establishes reporting requirements.

Established deadlines allow the intelligence battalion's production and analysis cell sufficient time to incorporate subordinate INTSUMs into intelligence products. The MAGTF MSCs and elements' G-2/S-2s determine INTSUM requirements for their headquarters and subordinate elements. The MEF TTP and standing operating procedures (SOP), which reflect anticipated theaters of operations TTP, should establish standard INTSUM reporting requirements.

Although any unit can produce INTSUMs, normally they are generated by major subordinate or higher level commands. An abbreviated INTSUM format focused on significant threat actions and anticipated future actions may be more appropriate for lower tactical echelons.

Higher command levels, particularly JTFs and unified commands, usually publish a daily intelligence summary (DISUM) every 24 hours. While INTSUMs generally provide a fine-grained tactical perspective, the DISUM encompasses more aspects of a threat country's elements of national power and focuses on operational-level intelligence analysis and estimates. Generally, MAGTF command elements tasked as JTF headquarters are required to submit DISUMs to the combatant command's commander in chief. The combatant command's TTP provides for the DISUM format, which may vary from theater to theater.

Generally based on the intelligence estimate format, the INTSUM should be tailored and focused on the mission, type of unit, and information and intelligence needs of the commander. Formats for INTSUMs can be in written or graphic and text formats.

WRITTEN INTELLIGENCE SUMMARY FORMAT

The sample below provides a written INTSUM format that may be posted on a website. This format is representative of an INTSUM format used at the MAGTF or MSC level for conventional military operations. Generally, this format is modified to meet the unique needs of military operations other than war (MOOTW).

Note: Paragraphs not applicable to the reporting unit are annotated "NA" or the paragraph may be skipped (paragraph numbering should remain the same). If no significant information or intelligence is available for a particular paragraph, the notation "NSTR" (nothing significant to report) may be used. The annotation "( )" reflects classification of that information line.

CLASSIFICATION/RELEASABILTY
INTSUM #: (Sequentially numbered such, as "DD-001-97")
DTG: DDHHMM (time zone) (month) YY
INFO cutoff DTG
PERIOD: DDHHMM TO DDHHMM (month) YY

I. (U) Highlights:

A. (U) Ground: Highlights of the current ground situation, usually divided by area or sector.

B. (U) Air: Highlights of the current air situation.

II. (U) Summary of Enemy Situation: (Each category should use the commander's related priority intelligence requirements [PIRs] as the basis for the analysis and assessment. For MOOTW operations, separate paragraphs for each category of threat or significant power group may be created to supplement or replace the below categories.)

A. (U) Ground: Detailed analysis of the battlefield by area or sector with comments on projected activity in the next 12 hours.

B. (U) Air: Detailed analysis of the air and air defense situation with comments on projected activity in the next 12 hours.

C. (U) Naval: Detailed analysis of the naval situation with comments on projected activity in the next 12 hours.

D. (U) Surface-to-Surface Missile and Weapons of Mass Destruction: Detailed analysis of the surface-to-surface missile and weapons of mass destruction situation with comments on projected activity in the next 12 hours.

E. (U) Special Operations Forces: Detailed analysis of the special operations forces, force protection, and rear area security situation with comments on projected activity in the next 12 hours.

F. (U) Other: May be used for detailed analysis of paramilitary, insurgent, terrorist, or other significant threat categories not discussed elsewhere.

III. (U) MEF or MSC Assessment:

A. (U) Most Likely Course of Action:

B. (U) Most Dangerous Course of Action:

C. (U) Others: (as necessary)

IV. (U) Enemy Movement During the Reporting Period: Major enemy units (to include at least two levels below that of the reporting command) and universal transverse mercator [UTM] coordinates of the new position.

V. (U) PIRs: The commander's PIRs and current satisfaction level (i.e., partially satisfied, satisfied, not satisfied) assessment for each requirement.

VI. (U) Intelligence Plans, Missions, and Systems Status: Key intelligence collection, production, and dissemination plan updates; information on planned intelligence and reconnaissance missions; and intelligence systems status (generally only those systems that are less than fully operational). (The unit SOP or annex B to the OPORD prescribes the period covered by this paragraph.)

GRAPHIC INTELLIGENCE SUMMARY INSTRUCTIONS

In an effort to enhance the understanding of the INTSUM and to save dissemination time, the INTSUM is graphically portrayed as a single or set of map overlays. Intelligence summaries can be posted in graphic and text formats on web-based automated information systems, which provides MAGTF intelligence users with access to the web site the option of pulling intelligence and products.

There are limitations to electronically generated graphic INTSUMs. Graphics can require large bandwidth and processing power to be pulled over a web-based system, with possible degradation of the overall MAGTF tactical data network. Lower-level tactical units and allied nation forces may not possess the means to access and use the information, which generally requires graphic and text INTSUMs to be disseminated using other electronic transmission methods and hard copy delivery.

Graphic INTSUMs must convey essential intelligence and other information in a clear, concise, and easy to understand visual format. Because of the volume of detail to be presented, most graphic INTSUMs, particularly at higher commands, have evolved into digital slide shows. The unit SOP or Annex B to the OPORD establishes graphic INTSUM formats, which are tailored to the level of command, type of operation, and the commander's intelligence requirements. Generally graphic INTSUMs contain the same elements. The following are examples of common graphic INTSUM elements:

● Weather Graphics—Composite graphics, based on satellite imaging, showing area weather fronts, cloud coverage, high and low pressure areas, etc. May include forecast graphics for specified future periods.

● 5-Day Forecast—Similar to television weather forecasts, showing forecast weather conditions (e.g., cloudy, partly cloudy, rainy), high and low temperatures, winds, normal temperatures based on climatology, and any other elements that may be of interest to the commander; should also include light data for the same period.

● Weather Impacts Graphics—Normally presented in green, yellow, and red colored chart format; should include those forces, types of operations, or critical items of equipment that are essential to friendly and enemy unit mission performance.

● PIRs—Current and new PIRs, and may include a satisfaction level (i.e., not answered, partially answered, answered) assessment for each requirement.

● Activities and Assessments—Consists of a graphical situation map denoting locations of threat forces of interest and, if possible, graphically indicating status or combat effectiveness using color coding or other symbology. Depending on the level of command and information needs, separate graphics for categories of threat forces (i.e., ground, air, air defense) may be created to increase clarity. Each graphic should—

■ Note significant threat activity over the reporting period with text comment boxes tied to locations or an event numbering system with marginal text comments.

■ Provide an assessment based on the commander's PIRs.

■ Use supporting graphics to examine items in detail, such as aircraft sortie analysis or the location and status of a particular category of force or equipment (e.g., heavy equipment transporter systems, specialized units).

- Collection, Production, and Dissemination Plans and Status of Planned Missions and Tasks—Graphically presents locations of organic collection assets (e.g., reconnaissance teams, radio battalion assets, unmanned aerial vehicle tracks, sensor strings) and/or provides a time line showing daily projected availability windows and mission tracks (as applicable) of nonorganic supporting assets (e.g., Airborne Warning and Control System, RC-135, U2); also identifies changes to previous production and dissemination plans and any new plans.

- Outlook or Assessment—Provides an overall assessment of estimated threat courses of action (at a minimum, the threat's most likely and most dangerous courses of action). The assessment may be broken into estimate time periods, such as 24-48 hours, 48-96 hours, or whatever periods of time are applicable to the commands requirements to plan future actions. Courses of action should be graphically portrayed. In prehostilities or MOOTW, these graphics may be used to address anticipated political or societal actions or events that may impact the force.

APPENDIX G. INTELLIGENCE REPORT FORMAT

An intelligence report (INTREP) is a standardized report that is used to disseminate important intelligence without regard to a specific schedule. The first intelligence element acquiring the information prepares and disseminates the INTREP as rapidly as possible to units requiring the information. Generally, each report will concern only a single item.

An INTREP is generally required whenever an event occurs that is likely to result in a change in the friendly plan or when a change to the current or future analytical assessment is made. The intelligence element generally initiates an INTREP when facts influencing threat capabilities have been observed or when a change in threat capabilities has taken place. The commander's priority intelligence requirements serve as the basis for determining what information warrants an INTREP.

Whenever possible, the INTREP should include the originator's significant intelligence assessment as well as a source reliability and accuracy evaluation. The format below is a sample INTREP that would be posted on a web site or forwarded via SECRET internet protocol router network (SIPRNET) or MAGTF tactical data network (TDN) electronic mail.

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CLASSIFICATION/RELEASABILITY

INTREP#: DD-001-97 (Sequentially numbered by originating
unit)

DTG: DDHHMM(Time Zone) (Month) YY


I. ( ) Significant Event(s): Summarize the significant
event(s) or developments that initiated the INTREP. Answer
either the 5Ws (i.e., who, what, where, when, and why) or
the SALUTE (i.e., size, activity, location, unit, time,
equipment) formats.


II. ( ) Assessment: Describe the effect of the current
activity on threat capabilities or courses of action.


III.( ) Evaluation of Source: State the original information
source and evaluate the accuracy and reliability of that
source.
```

Note: ( ) Reflects classification of that information line.

APPENDIX H. INTELLIGENCE INFORMATION BRIEF

The intent of the intelligence information brief is to enhance situational awareness and impart understanding. Intelligence information briefings may be as simple as a quick verbal update to a commander in front of a situation map or as complex as a Marine expeditionary force or joint task force level daily update to the commanding general and staff. At lower tactical levels, briefings are generally less formal and often short-notice. Higher commands generally employ regularly scheduled daily update briefings, which include intelligence. Regardless of the degree of formality or the level of command, a standard briefing format or outline can help intelligence personnel to rapidly and effectively organize for the brief.

To develop and deliver an effective intelligence information brief, intelligence personnel should—

- Know the audience. Is the audience the commander, the staff, or subordinate commanders? Who is the focus of the brief? What is audience's level of knowledge concerning the subject? Does the commander have any briefing preferences?
- Know the purpose and intent of the briefing. Is the brief a critical events update, or is it intended to describe in detail the threat and area of operations prior to crisis action planning?
- Concentrate on essential information and intelligence; prepare to provide details or expand intelligence should questions arise.
- Use clear, concise, readable graphics; ensure graphics can be seen from the rear of the room.
- Know the information; anticipate questions on unfamiliar subjects and arrange to have a subject matter expert present or take questions for follow-up research; never make up an answer.
- Distinguish between known facts and gaps or estimates.

The most common type of intelligence information briefing is the boardwalk. The boardwalk is an informal, on-demand brief conducted using the combat operations center map boards or screen displays from automated systems. Generally, the brief only presents significant changes to threat capabilities or courses of action. This brief also provides the commander an opportunity to ask direct questions.

At higher command echelons, the most common type of intelligence information brief is the commander's morning or evening update brief. Usually more formal and detailed, these briefs are scheduled for set times either once or twice per day. The planning, decision execution, and assessment cycle or unit standing operating procedure determines the schedule. In addition to briefing the current situation and significant events, this brief may address the commander's priority intelligence requirements (PIRs); collection, production, dissemination plans and status; weather; and estimates of future threat actions. Often briefings are presented using graphics software.

By focusing on intelligence and events that correspond to the commander's PIRs, the briefer can quickly organize information and intelligence as well as ensure that the commander is given the most essential information in the shortest amount of time. The brief is also used to present significant occurrences affecting current or future plans.

The following are examples of update briefing elements:

- Weather Forecast.
- Weather Effects Assessment.
- PIRs and Intelligence Requirements (IRs).
- Situation (e.g., ground, air, air defense) Keyed to PIRs.

● Collection, Production, and Dissemination Plan Status.
● Intelligence Estimate (at a minimum, the most likely and most dangerous enemy courses of action).

These elements closely follow the elements of the web-based intelligence summary (INTSUM) graphic. See appendix F. Because the INTSUM and the update provide the same intelligence and other information, using the same format and graphics can save time and resources. To save more time, elements that have not changed since the last briefing can be briefed as "no change." However, the weather forecast, PIRs, plans status, and intelligence estimate should always be briefed.

APPENDIX I. PRODUCTION REQUIREMENT AND REQUEST FOR INTELLIGENCE FORMAT

An intelligence production requirement (IPR), production requirement (PR), or request for intelligence (RFI) begins as an intelligence requirement (IR) levied on a unit's intelligence section. If the unit cannot satisfy the requirement with the available resources, the requirement must be forwarded up the chain of command for satisfaction. The requirement then becomes either an intelligence collection requirement (ICR), an RFI, or an IPR. Single or multiple requests for information may be combined into one PR.

A requirement must contain the following four basic elements:

- Who—Organization and specific office or individual that submitted the original requirement.
- What—Statement describing the intelligence required.
- When—Latest time information of value.
- How—Requested product format (e.g., hard copy, soft copy, verbal report), quantities, all receiving units.

Most theater tactics, techniques, and procedures (TTP) combine the three forms of requirements into one basic PR or RFI format. The joint task force headquarters intelligence directorate or combatant command joint intelligence center receiving the requirement determines whether collection or product development is necessary.

Defense Intelligence Agency also has an established basic PR or RFI format. This format is used in the Community On-Line Intelligence System for End Users and Managers (COLISEUM), which has become the standard medium for requirements submission throughout the Department of Defense intelligence production community. The following COLISEUM format is from Defense Intelligence Management Document (DIMD) 0000-151C-95, *Department of Defense Intelligence Production Program (DODIPP): Production Procedures.* Although theater TTP formats generally follow the same elements, they are modified according to the specific theater needs. Marine air-ground task forces and Marine Corps forces headquarters must follow the procedures established in their theater of operation.

Item 1. PR Number—A 12-space number with 10 alphanumeric characters and 2 separation dashes (e.g., C610-94-0001). The unit intelligence section requesting the information or production enters this number, which is unique to the unit. The first four characters are the customer's statement of intelligence interest (SII) account number or in a crisis, the customer's unit identification code (UIC). The second two numbers are the fiscal year. The last four numbers are the customer's sequence number for PRs or RFIs submitted in the fiscal year.

Item 2. Subject—A short descriptive, unclassified (if possible) title. Clarity is more important than keeping the subject unclassified.

Item 3. Customer's Organization—This line should include the end user's name, organization, mailing address, electronic-mail address (clearly identify Joint Worldwide Intelligence Communications Systems [JWICS] or Secret internet protocol router network [SIPRNET]), naval message address, and if possible, the customer's commercial and DSN phone numbers.

Item 4. Date of Request—Entered by the supporting intelligence office in YYMMDD format.

Item 5. Date Product Required—The latest date the product or information will be of value to the customer. Also referred to as latest time information of value (LTIOV).

Item 6. Form and Frequency of Response—This item is key to getting the desired response to the requirement. Sub items should be narrative with an emphasis on clarity:

- **Media**—Identify the preferred product form and second and third alternatives. Examples are message, floppy disk, CD-ROM, on-line data base, data base printout, bound hard copy report, study, or handbook. In addition to the media requested, the production element often disseminates intelligence and pertinent information in other media to increase access to a wider number of potential users.
- **Frequency**—Specify request for scheduled, non-crisis-related production as one-time, as required, or recurring. Crisis or immediate production requests are normally handled as one-time requests unless otherwise specified.
- **Revision or New Product**—Specify the existing product requiring update as completely as possible, or specify as a new PR.
- **Classification and Releasability**—Provide the desired classification and the highest classification that can be used by the customer. If the product needs to be releasable to foreign forces, specify which forces, if known, and justify the release.

Item 7. Statement of Requirement—The first paragraph should provide a summary of the requirement in 50 words or less. If the requirement supports an operation plan or contingency plan, the first sentence should identify which plan. Subsequent paragraphs should provide greater detail, specific intelligence and information elements, and a justification. The justification should specify what intelligence and other information sources have been consulted and why they were not sufficient to answer the requirement. If the requirement addresses separate questions, or multiple countries or topics, they must be prioritized. If all requests carry the same priority, list them by time urgency.

Item 8. Comments—Additional comments as necessary.

Item 9. Security Classification—The highest classification of the question and information contained in the requirement. The lower the classification, the easier it will be to process and use; however, clarity should not be sacrificed for lower classification. Codeword or special access program requirements will be submitted through appropriate channels and may require additional time to transmit and process.

APPENDIX J. GLOSSARY

SECTION I. ACRONYMS AND ABBREVIATIONS

AA. . . . . avenue of approach
ACE . . . . aviation combat element
AC/S . . . . .assistant chief of staff
ADA . . . . air defense artillery
AFP . . . . all-source fusion platoon
AI . . . . air interdiction
AIntP . . . . allied intelligence publication
AO. . . . . .area of operations
AOA . . . . amphibious objective area
AOI . . . . area of interest
ATARS . . . . advanced tactical airborne
reconnaissance system
ATF. . . . . amphibious task force
ATO . . . . air tasking order
AWACS . . . . Airborne Warning and
Control System

BDA . . . . battle damage assessment
BDE . . . . brigade
BE . . . . basic encyclopedia
BP . . . . .battle position

C2 .command and control
C2W . . . . command and control warfare
CA. . . . . .combat assessment
CAS. . . . . .close air support
CATF . . . . . commander, amphibious task force
CATK . . . . counterattack
CCIR . . . . commander's critical information
requirements
CD-ROM . . . . compact disc read only memory
CE . . . . command element
CG. commanding general
CHATS . . . . . . CI/HUMINT automated tool set
CI .counterintelligence
CIA . . . . Central Intelligence Agency
CIB . . . . controlled image base
CIC . . . . combat intelligence center
CINC. . . . . commander in chief
CIS . . . . communications and
information systems
CNTRMOB. . . . . countermobility
COA . . . . course of action
COC . . . . combat operations center
COG . . . . .center of gravity

COLISEUM . . . . .Community On-Line
Intelligence System for
End Users and Managers
CONPLAN. . . . . .contingency plan
COO. . . . . combined obstacle overlay
CP. . . . . .command post
CPX . . . . .command post exercise
CSS . . . . combat service support

D3A . . . . decide, detect, deliver, assess
DDHHMM. . . . . day, hour, minute
DEST . . . . .destination
DIA . . . . Defense Intelligence Agency
DIMD . . . . . . defense intelligence management
document
DISUM. . . . . .daily intelligence summary
DMGD . . . . damaged
DMS. . . . . Defense Message System
DOD . . . . Department of Defense
DODIPP. . . . . .Department of Defense
Intelligence Production Program
DON . . . . Department of the Navy
DP . . . . decision point
DPM. . . . . Dissemination Program Manager
DSN . . . . .Defense Switched Network
DST . . . . decision support template
DTG. .date-time group
DZ . . . . .drop zone

EA . . . . electronic attack
e.g. . . . . for example
EPW. . . . . .enemy prisoner of war

FARP . . . . . forward arming and refueling point
FDA . . . . functional damage assessment
FFC . . . . force fires cell
FFIR . . . . .friendly force information
requirements
FLIR. . . . . .forward-looking infrared
FM . . . . field manual (Army)
FMFRP. . . . . Fleet Marine Force
reference publication
FSSG . . . . .force service support group

G-1 . . . . .manpower or personnel staff
officer/organization

G-2 . . . . intelligence staff officer/
organization
G-3 . . . . . . operations staff officer/organization
G-4 . . . . logistics staff officer/organization
G-5 . . . . plans officer/organization
GCE . . . . ground combat element
GENSER. . . . . general service
GEOINT . . . . geographic intelligence

HF . . . . high frequency
HLZ. . . . . helicopter landing zone
HN. . . . . host nation
HPT. . . . . .high-payoff target
HPTL . . . . .high-payoff target list
HQ. . . . . .headquarters
HUMINT . . . . .human intelligence
HVT . . . . high-value target

i.e. . . . . that is
I&W . . . . .indications and warning
IAS . . . . .intelligence analysis system
ICR . . . . intelligence collection requirement
IDR . . . . intelligence dissemination requirement
IIP . . . . imagery intelligence platoon
IMINT. . . . . .imagery intelligence
IMO. . . . . .imagery and mapping officer
intel bn . . . . intelligence battalion
INTELINK . . . . intelligence link
INTELINK-S . . . . . . intelligence link-SECRET
INTREP . . . . intelligence report
INTSUM. . . . . .intelligence summary
IOC . . . . intelligence operations center
IPB . . . . .intelligence preparation of
the battlespace
IPR . . . . . . intelligence production requirement
IR . . . . .intelligence requirement
ISC . . . . intelligence support coordinator
ISM . . . . . . .intelligence synchronization matrix
ISS. . . . . .intelligence synchronization sheet

J-2 . . . . .intelligence directorate
JAC . . . . joint analysis center
JCS . . . . .Joint Chiefs of Staff
JDISS . . . . Joint Deployable Intelligence
Support System
JDS . . . . .Joint Dissemination System
JFC . . . . .joint force commander
JFIC. . . . . . .Joint Forces Intelligence Command
JIC . . . . joint intelligence center
JISE. . . . . joint intelligence support element
JOG-A . . . . joint operations graphic-air

JP. . . . . .joint publication
JSIPS. . . . . .Joint Services Imagery
Processing System
JSTARS . . . . . . joint surveillance, target attack
radar system
JTF . . . . .joint task force
JWICS. . . . . .Joint Worldwide Intelligence
Communications System

KIA . . . . killed in action
km . . . . kilometer
KOCOA . . . . key terrain, observation and fields
of fire, cover and concealment,
obstacles, and avenues of approach,
and mobility corridors

LCAC . . . . .landing craft air cushion
LOA . . . . limit of advance
LOC . . . . line of communications
LOS. . . . . line of sight
LTIOV . . . . . . .latest time information of value
LZ . . . . .landing zone

MAGTF . . . . Marine air-ground task force
MARFOR . . . . .Marine Corps forces
MAW . . . . .Marine aircraft wing
MCDP. . . . . . Marine Corps doctrinal publication
MCIA . . . . . Marine Corps Intelligence Activity
MCISU . . . Marine Corps Imagery Support Unit
MCOO . . . modified combined obstacle overlay
MCRP . . . . .Marine Corps reference publication
MCWP . . . . Marine Corps warfighting
publication
MEA . . . . mission effectiveness assessment
MEF . . . . Marine expeditionary force
METT-T . . . . mission, enemy, terrain and
weather, troops and
support available-
time available
MEU(SOC). . . . . Marine expeditionary unit
(special operations capable)
MIDB . . . . .modernized integrated database
mm . . . . millimeters
MOB . . . . mobility
MOOTW. . . . military operations other than war
MOS . . . . military occupational specialty
MSC . . . . major subordinate command
MSE . . . . .major subordinate element
MTI. . . . . moving target indicator
MTW. major theater war

NA. . . . . .not applicable

NAI . . . . named area of interest
NAIC . . . . National Air Intelligence Center
NATO . . . . . North Atlantic Treaty Organization
NBC . . . . nuclear, biological, and chemical
NEF . . . . naval expeditionary force
NEO . . . . . noncombatant evacuation operation
NGIC . . . . . National Ground Intelligence Center
NGO . . . . nongovernmental organization
NIMA . . . . National Imagery and
Mapping Agency
NIPRNET . . . . nonsecure internet protocol
router network
NIS . . . . national input segment
NIST . . . . national intelligence support team
NMIC . . National Maritime Intelligence Center
NOE . . . . nap of the earth
NSA . . . . National Security Agency
NSTR . . . . nothing significant to report
NVG . . . . night vision goggles

obj . . . . objective
OCAC . . . . operations control and
analysis center
OIC . . . . officer in charge
OMFTS . . . operational maneuver from the sea
OOB . . . . order of battle
OPCON . . . . operational control
OPLAN . . . . operation plan
OPORD . . . . operation order

P&A . . . . production and analysis
PDA . . . . physical damage assessment
PDE&A . . . . planning, decision, execution,
and assessment
PIR . . . . priority intelligence requirement
POC . . . . point of contact
POL . . . . petroleum, oils, and lubricants
PR . . . . production requirement
PVO . . . . private voluntary organization

RAG . . . . regimental artillery group
RC . . . . reconnaissance capable
recon . . . . reconnaissance
rep . . . . representative
RFI . . . . request for intelligence
RR . . . . reattack recommendation
RRS . . . . remote receive station

S-1 . . . . . . manpower or personnel staff officer/
organization
S-2 . . . . . intelligence staff officer/organization
S-3 . . . . operations staff officer/organization

SALUTE . . . . size, activity, location, unit,
time, equipment
SAM . . . . surface-to-air missile
SARC . . . . surveillance and reconnaissance cell
SATCOM . . . . satellite communications
SCI . . . . . sensitive compartmented information
SCR . . . . single channel radio
SIDS . . . . secondary imagery dissemination
system
SIGINT . . . . signals intelligence
SII . . . . statement of intelligence interest
SIPRNET . . . . SECRET Internet Protocol
Router Network
SOA . . . . sustained operations ashore
SOP . . . . standing operating procedure
SPMAGTF . . . . special-purpose Marine
air-ground task force
SPP . . . . shared production program
STANAG . . . . standardization agreement
(NATO)

TAA . . . . tactical assembly area
TAI . . . . targeted area of interest
TCAC . . . . technical control and analysis center
TDN . . . . tactical data network
T/E . . . . table of equipment
TEG . . . . tactical exploitation group
TERPES . . . . tactical electronic reconnaissance
processing and evaluation system
T/O . . . . table of organization
topo . . . . topographic
TOR . . . . time of report
TPC . . . . topographic production capability
TPL . . . . time phase lines
TRSS . . . . tactical remote sensor system
TSA . . . . target system assessment
TTP . . . . . . tactics, techniques, and procedures

UAV . . . . unmanned aerial vehicle
UIC . . . . unit identification code
U.S. . . . . United States
UTM . . . . universal transverse mercator

VHF . . . . very high frequency
VMAQ . . . . Marine tactical electronic
warfare squadron
VMU . . . . Marine unmanned aerial
vehicle squadron
VO . . . . validation office

WIA . . . . wounded in action
YYMMDD . . . . year, month, day

SECTION II. DEFINITIONS

a priori—Probabilities, in the absence of other information; presupposed by experience.

all-source intelligence—Intelligence products and/or organizations and activities that incorporate all sources of information, including, most frequently, human resources intelligence, imagery intelligence, measurement and signature intelligence, signals intelligence, and open source data, in the production of finished intelligence. (JP 1-02)

amphibious force—An amphibious task force and a landing force together with other forces that are trained, organized, and equipped for amphibious operations. (Proposed by JP 3-02 for inclusion in JP 1-02)

amphibious objective area—A geographical area, delineated in the initiating directive, for purposes of command and control within which is located the objective(s) to be secured by the amphibious task force. This area must be of sufficient size to ensure accomplishment of the amphibious task force's mission and must provide sufficient area for conducting necessary sea, air, and land operations. Also called AOA. (JP 1-02)

amphibious task force—A Navy task organization formed to conduct amphibious operations. The amphibious task force, together with the landing force and other forces, constitutes the amphibious force. Also called ATF. (Proposed by JP 3-02 for inclusion in JP 1-02)

analysis—In intelligence usage, a step in the processing phase of the intelligence cycle in which information is subjected to review in order to identify significant facts for subsequent interpretation. See also intelligence cycle. (JP 1-02) The sifting and sorting of evaluated information to isolate significant elements with respect to the mission and operations of the command. (MCWP 2-1)

area of interest—That area of concern to the commander, including the area of influence, areas adjacent thereto, and extending into enemy territory to the objectives of current or planned operations. This area also includes areas occupied by enemy forces who could jeopardize the accomplishment of the mission. Also called AOI. (JP 1-02)

area of operations—An operational area defined by the joint force commander for land and naval forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. Also called AO. (JP 1-02)

aviation combat element—The core element of a Marine air-ground task force that is task-organized to conduct aviation operations. The aviation combat element provides all or a portion of the six functions of Marine aviation necessary to accomplish the Marine air-ground task force's mission. These functions are anti-air warfare, offensive air support, assault support, electronic warfare, air reconnaissance, and control of aircraft and missiles. The aviation combat element is usually composed of an aviation unit headquarters and various other aviation units or their detachments. It can vary in size from a small aviation detachment of specifically required aircraft to one or more Marine aircraft wings. The aviation combat element may contain other Service or foreign military forces assigned or attached to the Marine air-ground task force. The aviation combat element itself is not a formal command. Also called ACE. (Approved for inclusion in next version of MCRP 5-12C)

basic intelligence—Fundamental intelligence concern-ing the general situation, resources, capabilities, and vulnerabilities of foreign countries or areas which may be used as reference material in the planning of operations at any level and in evaluating subsequent information relating to the same subject. (JP 1-02)

battle damage assessment—1. The timely and accurate estimate of damage resulting from the application of military force, either lethal or non-lethal, against a predetermined objective. Battle damage assessment can be applied to the employment of all types of weapon systems (air, ground, naval, and special forces weapon systems) throughout the range of military operations. Battle damage assessment is primarily an intelligence responsibility with required inputs and coordination from the operators. Battle damage assessment is composed of physical damage assessment, functional damage assessment, and target system assessment. Also called BDA. (JP 1-02) **2**. In Marine Corps usage, the timely and accurate estimate of the damage resulting from the application of military force. BDA estimates physical damage to a particular target, functional damage to that target, and the capability of the entire target system to continue its operations. (MCWP 5-12C)

battlespace—All aspects of air, surface, subsurface, land, space, and electromagnetic spectrum which encompass the area of influence and area of interest. (MCRP 5-12C)

battlespace dominance—The degree of control over the dimensions of the battlespace which enhances friendly freedom of action and denies enemy freedom of action. It permits force sustainment and application of power projection to accomplish the full range of potential operational and tactical missions. It includes all actions conducted against enemy capabilities to influence future operations. (MCRP 5-12C)

branch(es)—A contingency plan or course of action (an option built into the basic plan or course of action) for changing the mission, disposition, orientation, or direction of movement of the force to aid success of the operation based on anticipated events, opportunities, or disruptions caused by enemy actions. See also sequel(s). (MCRP 5-12C)

centers of gravity—1. Those characteristics, capa-bilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight. Also called COG. (JP 1-02) **2**. A key source of strength without which an enemy cannot function. (MCDP 1-2)

centralized control—In military operations, a mode of battlespace management in which one echelon of command exercises total authority and direction of all aspects of one or more warfighting functions. It is a method of control where detailed orders are issued and total unity of action is the overriding consideration. (MCRP 5-12C)

collate—1. The grouping together of related items to provide a record of events and facilitate further processing. **2**. To compare critically two or more items or documents concerning the same general subject; normally accomplished in the processing phase in the intelligence cycle. (JP 1-02)

collection—Acquisition of information and the provision of this information to processing and/or production elements. (JP 1-02) In Marine Corps usage, the gathering of intelligence data and information to satisfy the identified requirements. (MCWP 5-12C)

collection agency—Any individual, organization, or unit that has access to sources of information and the capability of collecting information from them. (JP 1-02)

collection asset—A collection system, platform, or capability that is supporting, assigned, or attached to a particular commander. (JP 1-02)

collection management—The process of converting intelligence requirements into collection requirements, establishing priorities, tasking or coordinating with appropriate collection sources or agencies, monitoring results, and retasking, as required. (JP 1-02)

collection manager—An individual with responsibility for the timely and efficient tasking of organic collection resources and the development of requirements for theater and national assets that could satisfy specific information needs in support of the mission. (JP 1-02)

collection plan—A plan for collecting information from all available sources to meet intelligence requirements and for transforming those requirements into orders and requests to appropriate agencies. (JP 1-02)

combat assessment—The determination of the overall effectiveness of tactical force employment during military operations. Combat assessment is composed of three major components, (a) battle damage assessment (BDA), (b) munitions effects assessment, and (c) future course-of-action (COA) or reattack recommendation. Also called CA. (Proposed by JP 3-60 for inclusion in JP 1-02.)

combat data—Data derived from reporting by opera-tional units. (MCWP 5-12C)

combatant command—A unified or specified command with a broad continuing mission under a single commander established and so designated by the President, through the Secretary of Defense and with the advice and assistance of the Chairman of the Joint Chiefs of Staff. Combatant commands typically have geographic or functional responsibilities. (JP 1-02)

combined operation—An operation conducted by forces of two or more allied nations acting together for the accomplishment of a single mission. (JP 1-02)

command and control—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (JP 1-02) Also in Marine Corps usage, the means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken. (MCRP 5-12C)

command and control warfare—The integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions. Also called C2W. (Excerpt from JP 1-02)

command element—The core **element** of a Marine air-ground task force that is the headquarters. The command element is composed of the commander, general or executive and special staff sections, headquarters section, and requisite communications support, intelligence and reconnaissance forces, necessary to accomplish the MAGTF's mission. The command element provides command and control, intelligence, and other support essential for effective planning and execution of operations by the other elements of the Marine air-ground task force. The command element varies in size and composition and may contain other Service or foreign military forces assigned or attached to the MAGTF. Also called CE. (Approved for inclusion in next version of MCRP 5-12C)

commander's critical information requirements—Information regarding the enemy and friendly activities and the environment identi-

fied by the commander as critical to maintaining situational awareness, planning future activities, and facilitating timely decisionmaking. Also called CCIR. NOTE: CCIRs are normally divided into three primary subcategories: priority intelligence requirements; friendly force information requirements; and essential elements of friendly information. (MCRP 5-12C)

commander's intent—A commander's clear, concise articulation of the purpose(s) behind one or more tasks assigned to a subordinate. It is one of two parts of every mission statement which guides the exercise of initiative in the absence of instructions. (MCRP 5-12C)

commander's planning guidance—Directions and/or instructions which focus the staff's course of action de-velopment during the planning process. (MCRP 5-12C)

communications intelligence—Technical and intel-ligence information derived from foreign communi-cations by other than the intended recipients. (JP 1-02)

communications security—The protection resulting from all measures designed to deny unauthorized persons information of value which might be derived from the possession and study of telecommunications, or to mislead unauthorized persons in their interpretation of the results of such possession and study. (Excerpt from JP 1-02)

coordination—The action necessary to ensure adequately integrated relationships between separate organizations located in the same area. Coordination may include such matters as fire support, emergency defense measures, area intelligence, and other situations in which coordination is considered necessary. (MCRP 5-12C)

counterintelligence—1. Information gathered and ac-tivities conducted to protect against espionage, other intelligence activities, sabotage, or

assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. (JP 1-02) **2.** Within the Marine Corps, counterintelligence constitutes active and passive measures intended to deny a threat force valuable information about the friendly situation, to detect and neutralize hostile intelligence collection, and to deceive the enemy as to friendly capabilities and intentions. Also called CI. (MCRP 5-12C)

crisis action planning—The time-sensitive planning for the deployment, employment, and sustainment of assigned and allocated forces and resources that occurs in response to a situation that may result in actual military operations. Crisis action planners base their plan on the circumstances that exist at the time planning occurs. (JP 1-02)

critical information—Specific facts about friendly in-tentions, capabilities, and activities vitally needed by adversaries for them to plan and act effectively so as to guarantee failure or unacceptable consequences for friendly mission accomplishment. (JP 1-02)

critical intelligence—Intelligence which is crucial and requires the immediate attention of the commander. It is required to enable the commander to make decisions that will provide a timely and appropriate response to actions by the potential/actual enemy. It includes but is not limited to the following: **a**. strong indications of the imminent outbreak of hostilities of any type (warning of attack); **b**. aggression of any nature against a friendly country; **c**. indications or use of nuclear-biological-chemical weapons (targets); **d**. significant events within potential enemy countries that may lead to modification of nuclear strike plans. (JP 1-02)

critical node—An element, position, or communica-tions entity whose disruption or destruction immediately degrades the ability of

a force to command, control, or effectively conduct combat operations. (JP 1-02)

critical vulnerability—An aspect of a center of gravity that if exploited will do the most significant damage to an adversary's ability to resist. A vulnerability cannot be critical unless it undermines a key strength. (MCRP 5-12C)

daily intelligence summary—A report prepared in message form at the joint force headquarters that provides higher, lateral, and subordinate headquarters with a summary of all significant intelligence produced during the previous 24-hour period. The "as of" time for information, content, and submission time for the report will be as specified by the joint force commander. Also called DISUM. (JP 1-02)

data—Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means. Any representations such as characters or analog quantities to which meaning is or might be assigned. (JP 1-02)

data base—Information that is normally structured and indexed for user access and review. Data bases may exist in the form of physical files (folders, documents, etc.) or formatted automated data processing system data files. (JP 1-02)

database replication—Process by which like databases reflect commonality in information and timeliness of that information. (MCRP 5-12C)

debriefing—Interviewing of an individual who has completed an intelligence or reconnaissance assignment or who has knowledge, whether through observation, participation, or otherwise, of operational or intelligence significance. (MCRP 5-12C)

decentralized control—In military operations, a mode of battlespace management in which a command echelon may delegate some or all

authority and direction for warfighting functions to subordinates. It requires careful and clear articulation of mission, intent, and main effort to unify efforts of subordinate leaders. (MCRP 5-12C)

deception operation—A military operation conducted to mislead the enemy. A unit conducting a deception operation may or may not make contact with the enemy. Deception operations include demonstrations, diversions, displays, feints, ruses, actions, events, means, and objectives. (MCRP 5-12C)

decision point—An event, area, or point in the battlespace where and when the friendly commander will make a critical decision. Also called DP. (MCRP 5-12C)

deliberate planning—A planning process for the deployment and employment of apportioned forces and resources that occurs in response to a hypothetical situation. Deliberate planners rely heavily on assumptions regarding the circumstances that will exist when the plan is executed. (JP 1-02)

deliberate targeting—The methodical identification, compilation, and analysis of potential fixed or semifixed targets followed by the decision of which potential targets will be attacked, when, and/or by what weapon and ordnance. It is practiced primarily during the planning phase of an operation, when planning for an attack, or when the tempo of combat is slow. (MCRP 5-12C)

descriptive intelligence—Class of intelligence which describes existing and previously existing conditions with the intent to promote situational awareness. Descriptive intelligence has two components: *basic intelligence*, which is general background knowledge about established and relatively constant conditions; and *current intelligence*, which is concerned with describing the existing situation. (MCRP 5-12C)

detachment—1. A part of a unit separated from its main organization for duty elsewhere. **2.** A temporary military or naval unit formed from other units or parts of units. (JP 1-02)

direction finding—A procedure for obtaining bearings of radio frequency emitters by using a highly directional antenna and a display unit on an intercept receiver or ancillary equipment. (JP 1-02)

direct support—A mission requiring a force to support another specific force and authorizing it to answer directly the supported force's request for assistance. (JP 1-02)

dissemination—Conveyance of intelligence to users in a suitable form. (JP 1-02)

dissemination management—Involves establishing dissemination priorities, selection of dissemination means, and monitoring the flow of intelligence throughout the command. The objective of dissemination management is to deliver the required intelligence to the appropriate user in proper form at the right time while ensuring that individual consumers and the dissemination system are not overloaded attempting to move unneeded or irrelevant information. Dissemination management also provides for use of security controls which do not impede the timely delivery or subsequent use of intelligence while protecting intelligence sources and methods. (MCRP 5-12C)

effective damage—That damage necessary to render a target element inoperative, unserviceable, nonproductive, or uninhabitable. (JP 1-02)

effectiveness—The measurement of the results of military action against a target by lethal or nonlethal means. (Proposed by JP 3-60 for inclusion in JP 1-02.)

effects—The result of military action against a target by lethal or nonlethal means. (Proposed by JP 3-60 for inclusion in JP 1-02.)

effects assessment—A determination of the overall effectiveness of force or weapon system employment during military operations and recommends future courses of action. Effects assessment is conducted at the strategic, operational, and tactical levels-of war or MOOTW. Effects assessment is the assessment of all execution effects, and includes steps commonly associated with combat assessment. (Proposed by JP 3-60 for inclusion in JP 1-02.)

electromagnetic spectrum—The range of frequencies of electromagnetic radiation from zero to infinity. It is divided into 26 alphabetically designated bands. (JP 1-02)

electronic attack—That division of electronic warfare involving the use of electromagnetic, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability. Also called EA. (JP 1-02)

electronic intelligence—Technical and geolocation intelligence derived from foreign noncommunications electromagnetic radiations emanating from other than nuclear detonations or radioactive sources. (JP 1-02)

electronic protection—That division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment or electronic warfare that degrade, neutralize, or destroy friendly combat capability. (JP 1-02)

electronic reconnaissance—The detection, identifica-tion, evaluation, and location of foreign electromagnetic radiations emanating from other than nuclear detonations or radioactive sources. (JP 1-02)

electronic warfare—Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. The three

major subdivisions within electronic warfare are electronic attack, electronic protection, and electronic warfare support. Also called EW. (Excerpt from JP 1-02)

electronic warfare support—That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support provides information required for immediate decisions involving electronic warfare operations and tactical actions such as threat avoidance, targeting, and homing. Electronic warfare support data can be used to produce signals intelligence (SIGINT), communications intelligence (COMINT), and electronic intelligence (ELINT). (JP 1-02)

essential elements of friendly information— **1.** Key questions likely to be asked by adversary officials and intelligence systems about specific friendly intentions, capabilities, and activities so they can obtain answers critical to their operational effectiveness. Also called EEFI. (JP 1-02) **2.** Specific facts about friendly intentions, capabilities, and activities needed by adversaries to plan and execute effective operations against our forces. (MCRP 5-12C)

estimative intelligence—Class of intelligence which attempts to anticipate future possibilities and probabilities based on an analysis of descriptive intelligence in the context of planned friendly and assessed enemy operations. See also **descriptive intelligence**. (MCRP 5-12C)

evaluation—In intelligence usage, appraisal of an item of information in terms of credibility, reliability, pertinence, and accuracy. Appraisal is accomplished at several stages within the intelligence cycle with progressively different contexts. Initial evaluations, made by case officers and report officers, are focused upon the reliability of the source and the accuracy of the information as judged by data available at or close to their operational levels. Later evaluations by intelligence analysts, are primarily concerned with verifying accuracy of information and may, in effect, convert information into intelligence. Appraisal or evaluation of items of information or intelligence is indicated by a standard letter-number system. The evaluation of the reliability of sources is designated by a letter from A through F, and the accuracy of the information is designated by numeral 1 through 6. These are two entirely independent appraisals, and these separate appraisals are indicated in accordance with the system indicated below. Thus, information adjudged to be "probably true" received from a "usually reliable source" is designated "B-2" or "B2," while information of which the "truth cannot be judged" received from a "usually reliable source" is designated "B-6" or "B6."

Reliability of Source

A - Completely reliable
B - Usually reliable
C - Fairly reliable
D - Not usually reliable
E - Unreliable
F - Reliability cannot be judged

Accuracy of Information

1 - Confirmed by other sources
2 - Probably true
3 - Possibly true
4 - Doubtful
5 - Improbable
6 - Truth cannot be judged (JP 1-02)

fires—The effects of lethal or nonlethal weapons. (JP 1-02)

force protection—Security program designed to protect Service members, civilian employees, family members, facilities, and equipment, in all locations and situations, accomplished through planned and integrated application of combatting terrorism, physical security, operations

security, personal protective services, and supported by intelligence, counterintelligence, and other security programs. (JP 1-02)

force reconnaissance company—A unit whose mission is to conduct preassault and deep postassault reconnaissance operations in support of a landing force and its subordinate elements. (MCRP 5-12C)

friendly force information requirements—Information the commander needs about friendly forces in order to develop plans and make effective decisions. Depending upon the circumstances, information on unit location, composition, readiness, personnel status, and logistics status could become a friendly force information requirement. Also called FFIR. (MCRP 5-12C)

functional damage assessment—The estimate of the effect of military force to degrade/destroy the functional or operational capability of the target to perform its intended mission and on the level of success in achieving operational objectives established against the target. This assessment is based upon all-source information, and includes an estimation of the time required for recuperation or replacement of the target function. (Upon approval of JP 3-60, this term and its definition will be included in JP 1-02.)

fusion—In intelligence usage, the process of examining all sources of intelligence and information to derive a complete assessment of activity. (JP 1-02)

fusion center—In intelligence usage, a physical location to accomplish fusion. It normally has sufficient intelligence automated data processing capability to assist in the process. (JP 1-02)

future operations section—**1.** In MAGTF operations, a section normally under the staff cognizance of the G-3 which focuses on planning/producing new fragmentary orders or the next change of major subordinate command

mission; this section forms and leads the integrated planning effort with a planning horizon of 72-120 hours out. It develops branch plans and sequels. **2.** In Marine aviation, that portion of the tactical air command center and aviation combat element commander's battlestaff responsible for the detailed planning and coordination of all future air operations conducted by the aviation combat element in support of the Marine air-ground task force. The future operations section plans for and publishes the next air tasking order(s) (normally a 48/72-hour period). (MCRP 5-12C)

general military intelligence—Intelligence concerning the (1) military capabilities of foreign countries or organizations or (2) topics affecting potential US or allied military operations, relating to the following subjects: armed forces capabilities, including order of battle, organization, training, tactics, doctrine, strategy, and other factors bearing on military strength and effectiveness; area and terrain intelligence, including urban areas, coasts and landing beaches, and meteorological, oceanographic, and geological intelligence; transportation in all modes; military materiel production and support industries,; military and civilian C4 systems; military economics, including foreign military assistance; insurgency and terrorism; military-political-sociological intelligence; location, identification, and description of military-related installations; government control; escape and evasion; and threats and forecasts. (Excludes scientific and technical intelligence.) (JP 1-02)

general support—That support which is given to the supported force as a whole and not to any particular subdivision thereof. (JP 1-02)

geographic coordinates—The quantities of latitude and longitude which define the position of a point on the surface of the earth with respect to the reference spheroid. (JP 1-02)

geographic intelligence—The process of collecting, organizing, analyzing, synthesizing, disseminating and utilizing geospatial information and services (GI&S) with regards to the military aspects of the terrain. Also called GEOINT. GEOINT is the integration and analysis of all-source geospatial information in support of specific Marine Corps operations. The analysis is focused on a specific mission and includes intensification of information detail and resolution to meet tactical requirements. GEOINT analysis is focused on the intelligence preparation of the battlespace (IPB) process and addresses key terrain, observation & fields of fire, cover & concealment, obstacles, avenues of approach & mobility corridors. This analysis is commonly referred to as KOCOA for easy reference.

geospatial information and services—The concept for collection, information extraction, storage, dissemination, and exploitation of geodetic, geomagnetic, imagery (both commercial and national source), gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to a precise location on the earth's surface. These data are used for military planning, training, and operations including navigation, mission planning, mission rehearsal, modeling, simulation and precise targeting. Geospatial information provides the basic framework for battlespace visualization. It is information produced by multiple sources to common interoperable data standards. It may be presented in the form of printed maps, charts, and publications; in digital simulation and modeling data bases; in photographic form; or in the form of digitized maps and charts or attributed centerline data. Geospatial services include tools that enable users to access and manipulate data, and also includes instruction, training, laboratory support, and guidance for the use of geospatial data. (JP 1-02)

global sourcing—A process of force provision or augmentation whereby resources may be drawn from any location/command worldwide. (MCRP 5-12C)

ground combat element—The core element of a Marine air-ground task force that is task-organized to conduct ground operations. It is usually constructed around an infantry organization but can vary in size from a small ground unit of any type, to one or more Marine divisions that can be independently maneuvered under the direction of the MAGTF commander. It includes appropriate ground combat and combat support forces and may contain other Service or foreign military forces assigned or attached to the Marine air-ground task force. The ground combat element itself is not a formal command. Also called GCE. (Approved for inclusion in next version of MCRP 5-12C)

helicopter landing zone—A specified ground area for landing assault helicopters to embark or disembark troops and/or cargo. A landing zone may contain one or more landing sites. Also called HLZ. (JP 1-02)

high-payoff target—A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. High-payoff targets are those high-value targets, identified through wargaming, which must be acquired and successfully attacked for the success of the friendly commander's mission. Also called HPT. (JP 1-02)

high-value target—A target the enemy commander requires for the successful completion of the mission. The loss of high-value targets would be expected to seriously degrade important enemy functions throughout the friendly commander's area of interest. Also called HVT. (JP 1-02)

human intelligence—**1.** A category of intelligence derived from information collected and provided by human sources. (JP 1-02) **2.** In Marine Corps usage, human intelligence operations cover a wide range of activities encompassing reconnaissance patrols, aircrew debriefs,

debriefing of refugees, interrogations of prisoners of war, and the conduct of counterintelligence force protection source operations. Also called HUMINT. (JP 1-02)

humanitarian assistance—Programs conducted to relieve or reduce the results of natural or manmade disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property. Humanitarian assistance provided by US forces is limited in scope and duration. The assistance provided is designed to supplement or complement the efforts of the host nation civil authorities or agencies that may have the primary responsibility for providing humanitarian assistance. (JP 1-02)

hydrography—The science which deals with the measurements and description of the physical features of the oceans, seas, lakes, rivers, and their adjoining coastal areas, with particular reference to their use for navigational purposes. (JP 1-02)

imagery exploitation—The cycle of processing and printing imagery to the positive or negative state, assembly into imagery packs, identification, interpretation, mensuration, information extraction, the preparation of reports, and the dissemination of information. (JP 1-02)

imagery intelligence—Intelligence derived from the exploitation of collection by visual photography, infrared sensors, lasers, electro-optics, and radar sensors such as synthetic aperture radar wherein images of objects are reproduced optically or electronically on film, electronic display devices, or other media. Also called IMINT. (JP 1-02)

imagery interpretation—The process of location, recognition, identification, and description of objects, activities, and terrain represented on imagery. (JP 1-02)

immediate targets—Targets upon which are detected too late to be included in the normal targeting process, therefore, effects have not been scheduled. Immediate targets have three subcategories: unplanned, unanticipated, and time-sensitive. (Upon approval of JP 3-60, this term and its definition will be included in JP 1-02.)

indications and warning—Those intelligence activities intended to detect and report time-sensitive intelligence information on foreign developments that could involve a threat to the United States or allied military, political, or economic interests or to US citizens abroad. It includes forewarning of enemy actions or intentions; the imminence of hostilities; insurgency; nuclear/non-nuclear attack on the United States, its overseas forces, or allied nations; hostile reactions to United States reconnaissance activities; terrorists' attacks; and other similar events. Also called I&W. (JP 1-02)

indirect effects—Result created through an inter-mediate effect or mechanism to produce the final outcome, which may be physical or psychological in nature. Indirect effects tend to be delayed, and may be difficult to recognize. (Proposed by JP 3-60 for inclusion in JP 1-02.)

information—**1.** Facts, data, or instructions in any medium or form. **2.** The meaning that a human assigns to data by means of the known conventions used in their representation. (JP 1-02)

information exchange requirement—The requirement for information to be passed between and among forces, organizations, or administrative structures concerning ongoing activities. Information exchange requirements identify who exchanges what information with whom, as well as why the information is necessary and how that information will be used. The quality (i.e., frequency, timeliness, security) and quantity (i.e., volume, speed, and type of information such as data, voice, and video) are attributes of the information exchange included

in the information exchange requirement. (MCRP 5-12C)

information report—Report used to forward raw information collected to fulfill intelligence requirements. (JP 1-02)

information requirements—Those items of information regarding the enemy and his environment which need to be collected and processed in order to meet the intelligence requirements of a commander. (JP 1-02)

integration—A stage in the intelligence cycle in which a pattern is formed through the selection and combination of evaluated information. (JP 1-02)

intelligence—**1.** The product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas. **2.** Information and knowledge about an adversary obtained through observation, investigation, analysis, or understanding. (JP 1-02) Also in Marine Corps usage, intelligence is knowledge about the enemy or the surrounding environment needed to support decision-making. This knowledge is the result of the collection, processing, exploitation, evaluation, integration, analysis, and interpretation of available information about the battlespace and threat. (MCRP 5-12C)

intelligence annex—A supporting document of an operation plan or order that provides detailed information on the enemy situation, assignment of intelligence tasks, and intelligence administrative procedures. (JP 1-02)

intelligence cycle—The steps by which information is converted into intelligence and made available to users. (Excerpt from JP 1-02)

intelligence data—Data derived from assets primarily dedicated to intelligence collection such as imagery systems, electronic intercept

equipment, human intelligence sources, etc. (MCRP 5-12C)

intelligence discipline—A well-defined area of intelligence collection, processing, exploitation, and reporting using a specific category of technical or human resources. There are five major disciplines: human intelligence, imagery intelligence, measurement and signature intelligence, signals intelligence (communications intelligence, electronic intelligence, and foreign instrumentation signals intelligence), and open-source intelligence. (JP 1-02)

intelligence estimate—The appraisal, expressed in writing or orally, of available intelligence relating to a specific situation or condition with a view to determining the courses of action open to the enemy or potential enemy and the order of probability of their adoption. (JP 1-02)

intelligence journal—A chronological log of intelligence activities covering a stated period, usually 24 hours. It is an index of reports and messages that have been received and transmitted, and of important events that have occurred, and actions taken. The journal is a permanent and official record. (JP 1-02)

intelligence operations—The variety of intelligence tasks that are carried out by various intelligence organizations and activities. (Excerpt from JP 1-02)

intelligence preparation of the battlespace—**1.** An analytical methodology employed to reduce un-certainties concerning the enemy, environment, and terrain for all types of operations. Intelligence preparation of the battlespace builds an extensive data base for each potential area in which a unit may be required to operate. The data base is then analyzed in detail to determine the impact of the enemy, en-vironment, and terrain on operations and presents it in graphic form. Intelligence preparation of the battlespace is a continuing process. Also called IPB. (JP 1-02) **2.** In Marine Corps usage, the

systematic, continuous process of analyzing the threat and environment in a specific geographic area. (MCRP 5-12C)

intelligence report—A specific report of information, usually on a single item, made at any level of command in tactical operations and disseminated as rapidly as possible in keeping with the timeliness of the information. Also called INTREP. (JP 1-02)

intelligence requirement—**1**. Any subject, general or specific, upon which there is a need for the collection of information, or the production of intelligence. (JP 1-02) **2**. In Marine Corps usage, questions about the enemy and the environment, the answers to which a commander requires to make sound decisions. Also called IR. (MCRP 5-12C)

intuitive decisionmaking—The act of reaching a conclusion which emphasizes pattern recognition based on knowledge, judgment, experience, education, intelligence, boldness, perception, and character. This approach focuses on assessment of the situation vice comparison of multiple options. (MCRP 5-12C)

joint deployable intelligence support system—A transportable workstation and communications suite that electronically extends a joint intelligence center to a joint task force or other tactical user. Also called JDISS. (JP 1-02)

joint force—A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments, operating under a single joint force commander. (JP 1-02)

joint intelligence center—The intelligence center of the joint force headquarters. The joint intelligence center is responsible for providing and producing the intelligence required to support the joint force commander and staff, components, task forces and elements, and the national intelligence community. Also called JIC. (JP 1-02)

joint intelligence support element—A subordinate joint force forms a joint intelligence support element as the focus for intelligence support for joint operations, providing the joint force commander, joint staff, and components with the complete air, space, ground, and maritime adversary situation. Also called JISE. (JP 1-02)

joint operations—A general term to describe military actions conducted by joint forces, or by Service forces in relationships (e.g., support, coordinating authority), which, of themselves, do not create joint forces. (JP 1- 02)

joint targeting coordination board—A group formed by the joint force commander to accomplish broad targeting oversight functions that may include but are not limited to coordinating targeting information, providing targeting guidance and priorities, and preparing and/or refining joint target lists. The board is normally comprised of representatives from the joint force staff, all components, and if required, component subordinate units. (JP 1-02)

joint task force—A joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander. Also called JTF. (JP 1-02)

Joint Worldwide Intelligence Communications System—The sensitive compartmented information portion of the Defense Information System Network. It incorporates advanced networking technologies that permit point-to-point or multipoint information exchange involving voice, text, graphics, data, and video teleconferencing. Also called JWICS. (JP 1-02)

large-scale map—A map having a scale of 1:75,000 or larger. (JP 1-02)

line of communications—A route, either land, water, and/or air, which connects an operating military force with a base of operations and along which supplies and military forces move. (JP 1-02)

list of targets—A tabulation of confirmed or suspect targets maintained by any echelon for informational and fire support planning purposes. (JP 1-02)

main effort—The designated subordinate unit whose mission at a given point in time is most critical to overall mission success. It is usually weighted with the preponderance of combat power and is directed against a center of gravity through a critical vulnerability. (MCRP 5-12C)

maneuver warfare—A warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope. (MCRP 5-12C)

mapping, charting, and geodesy—Maps, charts, and other data used for military planning, operations, and training. These products and data support air, land, and sea navigation; weapon system guidance; target positioning; and other military activities. These data are presented in the forms of topographic, planimetric, imaged, or thematic maps and graphics; nautical and aeronautical charts and publications; and, in digital and textual formats, gazetteers, which contain geophysical and geodetic data and coordinate lists. (JP 1-02)

Marine air-ground task force—The Marine Corps principal organization for all missions across the range of military operations, composed of forces task-organized under a single commander capable of responding rapidly to a contingency anywhere in the world. The types of forces in the MAGTF are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a combat service support element. The four core elements are categories of forces, not formal commands. The basic structure of the Marine air-ground task force never varies, though the number, size, and type of Marine Corps units comprising each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs, other Service and/or foreign military forces, to be assigned or attached. Also called MAGTF. (Approved for inclusion in next version of MCRP 5-12C)

Marine Corps Planning Process—A six-step methodology which helps organize the thought processes of the commander and staff throughout the planning and execution of military operations. It focuses on the threat and is based on the Marine Corps philosophy of maneuver warfare. It capitalizes on the principle of unity of command and supports the establishment and maintenance of tempo. The six steps consist of mission analysis, course of action development, course of action analysis, comparison/decision, orders development, and transition. Also called MCPP. NOTE: Tenets of the MCPP include top down planning, single battle concept, and integrated planning. (MCRP 5-12C)

Marine expeditionary force—The largest Marine air-ground task force and the Marine Corps principal warfighting organization, particularly for larger crises or contingencies. It is task-organized around a permanent command element and normally contains one or more Marine divisions, Marine aircraft wings, and Marine force service support groups. The Marine expeditionary force is capable of missions across the range of military operations, including amphibious assault and sustained operations ashore in any environment. It can operate from a sea base, a land base, or both. It may also contain other Service or foreign military forces assigned or attached to the MAGTF. Also called MEF. (Approved for inclusion in next version of MCRP 5-12C)

Marine expeditionary unit—A Marine air-ground task force that is constructed around an infantry battalion reinforced, a helicopter squadron reinforced, and a task-organized combat service support element. It normally fulfills Marine Corps forward sea-based deployment requirements. The Marine expeditionary unit provides an immediate reaction capability for crisis response and is capable of limited combat operations. It may contain other Service or foreign military forces assigned or attached. Also called MEU. (Approved for inclusion in next version of MCRP 5-12C)

Marine expeditionary unit (special operations capable)—The Marine Corps standard, forward-deployed, sea-based expeditionary organization. The MEU(SOC) is a MEU, augmented with selected personnel and equipment, that is trained and equipped with an enhanced capability to conduct amphibious operations and a variety of specialized missions, of limited scope and duration. These capabilities include specialized demolition, clandestine reconnaissance and surveillance, raids, in-extremis hostage recovery, and enabling operations for follow-on forces. The Marine expeditionary unit (special operations capable) is not a special operations force but, when directed by the National Command Authorities, the combatant commander in chief, and/or other operational commander, may conduct limited special operations in extremis, when other forces are inappropriate or unavailable. It may also contain other Service or foreign military forces assigned or attached to the Marine air-ground task force. Also called MEU (SOC). (Approved for inclusion in next version of MCRP 5-12C)

measurement and signature intelligence—Scientific and technical intelligence obtained by quantitative and qualitative analysis of data (metric, angle, spatial, wavelength, time dependence, modulation, plasma, and hydromagnetic) derived from specific technical sensors for the purpose of identifying any distinctive features associated with the target. The detected feature may be either reflected or emitted. (JP 1-02)

medium-scale map—A map having a scale larger than 1:600,000 and smaller than 1:75,000. (JP 1-02)

meteorological data—Meteorological facts pertaining to the atmosphere, such as wind, temperature, air density, and other phenomena which affect military operations. (JP 1-02)

military operations other than war—Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war. Also called MOOTW. (JP 1-02)

modified combined obstacle overlay—A product used to depict the battlespace's effects on military operations. It is normally based on a product depicting all obstacles to mobility, modified to also depict the following, which are not prescriptive nor inclusive: cross-country mobility classifications (such as RESTRICTED); objectives; avenues of approach and mobility corridors; likely locations of countermobility obstacle systems; likely engagement areas; and key terrain. Also called MCOO. (MCRP 5-12C)

multinational operations—A collective term to describe military actions conducted by forces of two or more nations, typically organized within the structure of a coalition or alliance. (JP 1-02)

multi-spectral imagery—The image of an object obtained simultaneously in a number of discrete spectral bands. (JP 1-02)

munitions effects assessment. Conducted concurrently and interactively with battle damage assessment, the assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and

recommend any required changes to the methodology, tactics, weapon system, munitions, fusing and/or weapon delivery parameters to increase force effectiveness. Munitions effects assessment is primarily the responsibility of operations with required inputs and coordination from the intelligence community. Also called MEA. (Proposed by JP 3-60 for inclusion in JP 1-02.)

named area of interest—A point or area along a particular avenue of approach through which enemy activity is expected to occur. Activity or lack of activity within a named area of interest will help to confirm or deny a particular enemy course of action. Also called NAI. (MCRP 5-12C)

national intelligence support team—A nationally sourced team composed of intelligence and communications experts from either Defense Intelligence Agency, Central Intelligence Agency, National Security Agency, or any combination of these agencies. Also called NIST. (JP 1-02)

near real time—Pertaining to the timeliness of data or information which has been delayed by the time required for electronic communication and automatic data processing. This implies that there are no significant delays. (JP 1-02)

noncombatant evacuation operations—Operations directed by the Department of State, the Department of Defense, or other appropriate authority whereby noncombatants are evacuated from foreign countries when their lives are endangered by war, civil unrest, or natural disaster to safe havens or to the United States. Also called NEO. (JP 1-02)

no-strike target list—A list designated by a commander containing targets not to be destroyed. Destruction of targets on the list would interfere with or unduly hamper projected friendly military operations, or friendly relations with indigenous personnel or governments. (JP 1-02)

open-source intelligence—Information of potential intelligence value that is available to the general public. (JP 1-02)

operational architecture—A description (often graphical) of the operational elements, assigned tasks, and information flows required to support the warfighter. It defines the type of information, the frequency of exchange, and what tasks are supported by these information exchanges. (MCRP 5-12C)

operational control—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON. (JP 1-02)

operations control and analysis center—Main node for the command and control of radio battalion signals intelligence operations and the overall coordination of MAGTF signals intelli-

gence operations. Processes, analyzes, produces, and disseminates signals intelligence-derived information and directs the ground-based electronic warfare activities of the radio battalion. Also called OCAC. (MCRP 5-12C)

operational level of war—The level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations. Activities at this level link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives, sequencing events to achieve the operational objectives, initiating actions, and applying resources to bring about and sustain these events. These activities imply a broader dimension of time or space than do tactics; they ensure the logistic and administrative support of tactical forces, and provide the means by which tactical successes are exploited to achieve strategic objectives. (JP 1-02)

order of battle—The identification, strength, command structure, and disposition of the personnel, units, and equipment of any military force. Also called OOB. (JP 1-02)

paramilitary forces—Forces or groups which are distinct from the regular armed forces of any country, but resembling them in organization, equipment, training, or mission. (JP 1-02)

physical damage assessment—The estimate of the quantitative extent of physical damage (through munitions blast, fragmentation, and/or fire damage effects) to a target resulting from the application of military force. This assessment is based upon observed or interpreted damage. (Proposed by JP 3-60 for inclusion in JP 1-02.)

planned targets—Targets that are known to exist in an operational area and which effects are scheduled in advance or are on-call. Examples range from targets on joint target lists (JTLs) in applicable campaign plans, to targets detected in

sufficient time to list in the air tasking order (ATO), mission-type orders, or fire support plans. Planned targets have two subcategories: *scheduled* or *on call.* (Proposed by JP 3-60 for inclusion in JP 1-02.)

priority intelligence requirements—1. Those intelligence requirements for which a commander has an anticipated and stated priority in his task of planning and decisionmaking. Also called PIR. (JP 1-02) **2.** In Marine Corps usage, an intelligence requirement associated with a decision that will critically affect the overall success of the command's mission. (MCRP 5-12C)

production—The conversion of information into intelligence through the integration, analysis, evaluation, and interpretation of all-source data and the preparation of intelligence products in support of known or anticipated user requirements. Production is a process of synthesis—the most important action in developing usable intelligence for the commander. (MCWP 2-1)

production management—Encompasses determining the scope, content, and format of each intelligence product, developing a plan and schedule for the development of each product, assigning priorities among the various production requirements, allocating processing, exploitation, and production resources, and integrating production efforts with intelligence collection and dissemination. (MCRP 5-12C)

reach back—The ability to exploit resources, capabilities, expertise, etc., not physically located in the theater or a joint operations area, when established. (MCRP 5-12C)

reactive target—The method used for targeting targets of opportunity. It is used when time and situation do not allow for targeting; i.e., during deliberate targeting, during an attack, when defending against an attack, or upon discovery of the location of a target such as a

radio jammer, tank, or antiaircraft weapon. (MCRP 5-12C)

reattack recommendation—An assessment, derived from the results of battle damage assessment and munitions effects assessment, providing the commander systematic advice on reattack of targets and further target selection to achieve objectives. The reattack recommendation considers objective achievement, target, and aimpoint selection, attack timing, tactics, weapon system and munitions selection. The reattack recommendation is a combined operations and intelligence function. (Proposed by JP 3-60 for inclusion in JP 1-02.)

request for information—Any specific time-sensitive ad hoc requirement for intelligence information or products to support an ongoing crisis or operation not necessarily related to standing requirements or scheduled intelligence production. A request for information can be initiated to respond to operational requirements and will be validated in accordance with the theater command's procedures. (JP 1-02)

scheduled targets—Planned targets that are known to exist in an operational area and are located in sufficient time for deliberate planning to meet specific campaign objectives. (Proposed by JP 3-60 for inclusion in JP 1-02.)

scientific and technical intelligence—The product resulting from the collection, evaluation, analysis, and interpretation of foreign scientific and technical information which covers: **a**. foreign developments in basic and applied research and in applied engineering techniques; and **b**. scientific and technical characteristics, capabilities, and limitations of all foreign military systems, weapons, weapon systems, and materiel, the research and development related thereto, and the production methods employed for their manufacture. (JP 1-02)

SECRET internet protocol router network—Worldwide SECRET level packet switch network that uses high-speed internet protocol routers and high-capacity Defense Information Systems Network circuitry. Also called SIPR-NET. (JP 1-02)

sensitive compartmented information—All information and materials bearing special community controls indicating restricted handling within present and future community intelligence collection programs and their end products for which community systems of compartmentation have been or will be formally established. Also called SCI. (JP 1-02)

sensitive compartmented information facility—An accredited area, room, group of rooms, or installation where sensitive compartmented information may be stored, used, discussed, and/or electronically processed. SCIF procedural and physical measures prevent the free access of persons unless they have been formally indoctrinated for the particular SCI authorized for use or storage within the SCIF. (JP 1-02)

sensor data—Data derived from sensors whose primary mission is surveillance or target acquisition, such as air surveillance radars, counter-battery radars, and remote ground sensors. (MCRP 5-12C)

sequel(s)—Major operations that follow the current major operations. Plans for these are based on the possible outcomes (success, stalemate, or defeat) associated with the current operation. (MCRP 5-12C)

signals intelligence—**1.** A category of intelligence comprising either individually or in combination all communications intelligence, electronics intelligence, and foreign instrumentation signals intelligence, however transmitted. **2.** Intelligence derived from communications, electronics, and foreign instrumentation signals. Also called SIGINT. (JP 1-02)

situational awareness—Knowledge and understanding of the current situation which promotes timely, relevant, and accurate assessment of

friendly, enemy, and other operations within the battlespace in order to facilitate decisionmaking. An informational perspective and skill that foster an ability to determine quickly the context and relevance of events that are unfolding. (MCRP 5-12C)

special purpose Marine air-ground task force—A Marine air-ground task force organized, trained and equipped with narrowly focused capabilities. It is designed to accomplish a specific mission, often of limited scope and duration. It may be any size, but normally it is a relatively small force--the size of a Marine expeditionary unit or smaller. It may contain other Service or foreign military forces assigned or attached to the Marine air-ground task force. Also called SPMAGTF. (Approved for inclusion in next version of MCRP 5-12C)

staff cognizance—The broad responsibility and authority over designated staff functions assigned to a general or executive staff officer (or their subordinate staff officers) in his area of primary interest. These responsibilities and authorities can range from coordination within the staff to the assignment or delegation to the staff officer by the commander to exercise his authority for a specified warfighting function or sub-function. Staff cognizance includes the responsibility for effective use of available resources and may include the authority for planning the employment of, organizing, assigning tasks, coordinating, and controlling forces for the accomplishment of assigned missions. Marine Corps orders and doctrine provide the notional staff cognizance for general or executive staff officers, which may be modified by the commander to meet his requirements. (Draft MCWP 6-2)

surveillance and reconnaissance cell—Primary element responsible for the supervision of MAGTF intelligence collection operations. Directs, coordinates, and monitors intelligence collection operations conducted by organic, attached, and direct support collection assets.

Also called SARC. (Change approved for inclusion in next version of MCRP 5-12C)

sustained operations ashore—The employment of Marine Corps forces on land for an extended duration. It can occur with or without sustainment from the sea. Also called SOA. (MCRP 5-12C)

synthesis—In intelligence usage, the examining and combining of processed information with other information and intelligence for final interpretation. (JP 1-02) Note: The piecing of information into a coherent, meaningful picture of the battlespace based on the ongoing or previous analysis of information and events taking place in the area of operations.

tactical intelligence—Intelligence that is required for planning and conducting tactical operations. (JP 1-02) In Marine Corps usage, tactical intelligence is concerned primarily with the location, capabilities, and possible intentions of enemy units on the battlefield and with the tactical aspects of terrain and weather within the battlespace. (MCRP 5-12C)

tactical effect—Result of action(s) at the individual unit, mission, or engagement level. Can be either direct or indirect, and typically acts in concert with other tactical effects to produce results at higher levels of war. (Proposed by JP 3-60 for inclusion in JP 1-02.)

target—A geographical area, complex, or installation planned for capture or destruction by military forces. (JP 1-02)

target analysis—An examination of potential targets to determine military importance, priority of attack, and weapons required to obtain a desired level of damage or casualties. (JP 1-02)

targeted area of interest—The geographical area or point along a mobility corridor where successful interdiction will cause the enemy to either abandon a particular course of action or

require him to use specialized engineer support to continue, where he can be acquired and engaged by friendly forces. Not all targeted areas of interest will form part of the friendly course of action; only targeted areas of interest associated with high-payoff targets are of interest to the staff. These are identified during staff planning and war-gaming. Target areas of interest differ from engagement areas in degree. Engagement areas plan for the use of all available weapons. Targeted areas of interest might be engaged by a single weapon. Also called TAI. (MCRP 5-12C)

target complex—A geographically integrated series of target concentrations. (JP 1-02)

target component—A major element of a target complex or target. It is any machinery, structure, personnel, or other productive asset that contributes to the operation or output of the target complex or target. (JP 1-02)

target concentration—A grouping of geographically proximate targets. (JP 1-02)

target critical damage point—The part of a target component that is most vital. Also called critical node. (JP 1-02)

target dossier—A file of assembled target intelligence about a specific geographic area. (JP 1-02)

target folder—A folder containing target intelligence and related materials prepared for planning and executing action against a specific target. (JP 1-02)

targeting—The process to detect, select, and prioritize targets, match the appropriate action, and assess the resulting effects based on the commander's objective, guidance, and intent. (Proposed by JP 3-60 for inclusion in JP 1-02.)

target intelligence—Intelligence which portrays and locates the components of a target

or target complex and indicates its vulnerability and relative importance. (JP 1-02)

target materials—Graphic, textual, tabular, digital, video, or other presentations of target intelligence, primarily designed to support operations against designated targets by one or more weapon(s) systems. Target materials are suitable for training, planning, executing, and evaluating military operations. (JP 1-02)

target of opportunity—A target visible to a surface or air sensor or observer, which is within range of available weapons and against which fire has not been scheduled or requested. (JP 1-02)

target priority—A grouping of targets with the indicated sequence of attack. (JP 1-02)

target signature—The characteristic pattern of a target displayed by detection and identification equipment. (JP 1-02)

target stress point—The weakest point (most vulnerable to damage) on the critical damage point. Also called vulnerable node. (JP 1-02)

target system—**1.** All the targets situated in a particular geographic area and functionally related. (DOD) **2.** A group of targets which are so related that their destruction will produce some particular effect desired by the attacker. (JP 1-02)

target system assessment—The broad assessment of the overall impact and effectiveness of the full spectrum of military force applied against the operation of an enemy target system or total combat effectiveness (including significant subdivisions of the system) relative to the operational objectives established. (Proposed by JP 3-60 for inclusion in JP 1-02.)

target system component—A set of targets belonging to one or more groups of industries and basic utilities required to produce compo-

nent parts of an end product such as periscopes, or one type of a series of interrelated commodities, such as aviation gasoline. (JP 1-02)

technical control—The performance of specialized or professional service, or the exercise of professional guidance or direction through the establishment of policies and procedures. (Proposed USMC definition per MCWP 6-2 and the next revision of MCRP 5-12C.)

tempo—The relative speed and rhythm of military operations over time. (MCRP 5-12C)

terrain analysis—The collection, analysis, evaluation, and interpretation of geographic information on the natural and manmade features of the terrain, combined with other relevant factors, to predict the effect of the terrain on military operations. (JP 1-02)

terrain study—An analysis and interpretation of natural and manmade features of an area, their effects on military operations, and the effect of weather and climate on these features. (JP 1-02)

time-sensitive targets—Those targets requiring immediate response because they pose (or will soon pose) a clear and present danger to friendly forces or are highly lucrative, fleeting targets of opportunity. (JP 1-02)

validation—A process normally associated with the collection of intelligence that provides official status to an identified requirement and confirms that the requirement is appropriate for a given collector and has not been previously satisfied. (JP 1-02)

vulnerability—**1.** The susceptibility of a nation or military force to any action by any means through which its war potential or combat effectiveness may be reduced or its will to fight diminished. **2.** The characteristics of a system which cause it to suffer a definite degradation (incapability to perform the designated mission) as a result of having been subjected to a certain level of effects in an unnatural (manmade) hostile environment. **3.** In information operations, a weakness in information system security design, procedures, implementation, or internal controls that could be exploited to gain unauthorized access to information or an information system. (JP 1-02)

warfighting functions—The six mutually supporting military activities integrated in the conduct of all military operations are:

1. **command and control**—The means by which a commander recognizes what needs to be done and sees to it that appropriate actions are taken.
2. **maneuver**—The movement of forces for the purpose of gaining an advantage over the enemy.
3. **fires**—Those means used to delay, disrupt, degrade, or destroy enemy capabilities, forces, or facilities as well as affect the enemy's will to fight.
4. **intelligence**—Knowledge about the enemy or the sur-rounding environment needed to support decision-making.
5. **logistics**—All activities required to move and sustain military forces.
6. **force protection**—Actions or efforts used to safe-guard own centers of gravity while protecting, concealing, reducing, or eliminating friendly critical vulnerabilities. (MCRP 5-12C)

weaponeering—The process of determining the quantity of a specific type of lethal or nonlethal weapons required to achieve a specific level of damage to a given target, considering target vulnerability, weapon effect, munitions delivery accuracy, damage criteria, probability of kill, and weapon reliability. (JP 1-02)

APPENDIX K. REFERENCES

North Atlantic Treaty Organization Standardization Agreements (STANAGs)

2022	Intelligence Reports
2077	Orders of Battle
2936	Intelligence Doctrine-AIntP-1(A)

Defense Intelligence Management Documents (DIMDs)

0000-151-94	Department of Defense Intelligence Production Program (DODIPP)
0000-151C-95	Department of Defense Intelligence Production Program (DODIPP): Production Procedures

Defense Intelligence Report

DI-2820-2-99	Battle Damage Assessment (BDA) Reference Handbook (final draft)

Joint Publications (JPs)

1-02	Department of Defense Dictionary of Military and Associated Terms
2-0	Doctrine for Intelligence Support to Joint Operations
2-01	Joint Intelligence Support to Military Operations
2-01.3	Joint Tactics, Techniques, and Procedures for Joint Intelligence Preparation of the Battlespace
2-02	National Intelligence Support to Joint Operations
2-03	Joint Tactics, Techniques, and Procedures for Geospatial Information and Services Support to Joint Operations
3-02	Joint Doctrine for Amphibious Operations
3-02.1	Joint Doctrine for Landing Force Operations
3-07	Joint Doctrine for Military Operations Other Than War
3-09	Doctrine for Joint Fire Support
3-13	Joint Doctrine for Information Operations
3-13.1	Joint Doctrine for Command and Control Warfare
3-50.3	Joint Doctrine for Evasion and Recovery
3-55	Doctrine for Reconnaissance, Surveillance, and Target Acquisition Support for Joint Operations
3-60	Doctrine for Joint Targeting (Draft)
5-00.2	Joint Task Force (JTF) Planning Guidance and Procedures

Marine Corps Intelligence Activity Publications

1586-001-96   MAGTF Contingency Reference Guide
1586-005-99   Urban Generic Information Requirements Handbook

Marine Corps Doctrinal Publications (MCDPs)

1   Warfighting
1-2   Campaigning
2   Intelligence
3   Expeditionary Operations
5   Planning
6   Command and Control

Marine Corps Warfighting Publications (MCWPs)

0-1.1   Componency
2-1   Intelligence Operations
2-12.1   Geographic Intelligence
2-14   Counterintelligence
2-15.2   Signals Intelligence
3-2   Aviation Operations
3-16   Fire Support Coordination in the Ground Combat Element
3-35.3   Military Operations on Urbanized Terrain (MOUT)
3-35.7   MAGTF Meteorological and Oceanographic Support
4-1   Logistics Operations
5-1   Marine Corps Planning Process
6-22   Communications and Information Systems

Marine Corps Reference Publications (MCRPs)

5-12C   Marine Corps Supplement to the Department of Defense
            Dictionary of Military and Associated Terms
5-12D   Organization of Marine Corps Forces

Fleet Marine Force Manual (FMFM)

6   Ground Combat Operations (under revision as MCWP 3-1)

Army Field Manuals (FMs)

34-8-2   Intelligence Officer's Handbook
34-81   Weather Support for Army Tactical Operations
34-81-1   Battlefield Weather Effects
34-130/FMFRP 3-23.2   Intelligence Preparation of the Battlefield (under revision as
            MCRP 2-12A)
101-5-1/MCRP 5-2A   Operational Terms and Graphics