ARI Contractor Report 96-66

Air-Ground Training Feedback System for Low Intensity Conlfict (AGTS)

James A. Huffman

BDM Federal, Inc.

August 1996

United States Army Research Institute for the Behavioral and Social Sciences

U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency Under the Jurisdiction of the Deputy Chief of Staff for Personnel

EDGAR M. JOHNSON
Director

NOTICES

DISTRIBUTION: This report has been cleared for release to the Defense Technical Information Center (DTIC) to comply with regulatory requirements. It has been given no primary distribution other than to DTIC and will be available only through DTIC or the National Technical Information Service (NTIS).

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U.S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: The views, opinions and findings in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other authorized documents.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	August 1996	Interim Report 06/30/93 - 09/29/94

4. TITLE AND SUBTITLE
Air-Ground Training Feedback System For Low Intensity Conflict (AGTS)

5. FUNDING NUMBERS
MDA903-92-D-0075-0016
2131
RO1
MIPR-FM&P funds

6. AUTHOR(S)
James A. Huffman

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
BDM FEDERAL INC.
DOD CENTER MONTEREY BAY
400 GIGLING ROAD
SEASIDE, CA 93955

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. ARMY RESEARCH INSTITUTE FOR THE
BEHAVIORAL AND SOCIAL SCIENCES
5001 EISENHOWER AVENUE
ALEXANDRIA, VA 22333-5600

10. SPONSORING/MONITORING AGENCY REPORT NUMBER
Contractor Report 96-66

11. SUPPLEMENTARY NOTES
The COR is Michael R. McCluskey. This report is published to meet legal and contractual requirements and may not meet ARI's scientific or professional standards for publication.

12a. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

The purpose of this report is to identify the doctrinal and operational mission battle tasks for close air support (CAS) in a low intensity conflict (LIC) as it is employed at the Joint Readiness Training Center (JRTC), Fort Polk, LA.

The increased emphasis on interservice operations and the availability of the Combat Training Centers (CTCs) that employ Airland Battle scenarios make it both practical and worthwhile to develop an air-ground training feedback system, with the results organized into a common database that would facilitate access to information by both the Army and Air Force. This study was designed to continue the analysis of the utilizaton of close air support by focusing on the use of close air support in a low intensity conflict. The development, and ultimate use, of these training feedback tools provides a quantifiable basis for further training resource requirements.

This report addresses the methodology for identifying those critical mission battle tasks necessary for the successful employment of close air support during low intensity operations and provides the resultant task list.

14. SUBJECT TERMS
TACP, AFAC, Operational Echelon, Tactical Organization, JRTC, Doctrinal Battle Tasks, Operational Battle Tasks, Air-Ground Training Feedback System (AGTFS), (TACCSs)

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNLIMITED

CONTRACT #: MDA 903-92-D-0075
DELIVERABLE #: 0016-0016AB
July 29, 1993

AIR-GROUND TRAINING FEEDBACK SYSTEM FOR LOW INTENSITY CONFLICT (AGTS)

James A. Huffman,
PRC, Inc

Submitted by: Mr. Michael R. McCluskey
Unit-Collective Training Research Unit
and, Jack Hiller, Director
Training Research Laboratory

Mr. Michael R. McCluskey, Contracting Officer's Representative

September 27, 1994

U.S. Army Research Institute

List of Battle Tasks for Close Air Support in a Low Intensity Conflict

LIST OF BATTLE TASKS FOR CLOSE AIR SUPPORT FOR THE AIR-GROUND TRAINING FEEDBACK SYSTEM FOR LOW INTENSITY CONFLICT (AGTS)

PURPOSE

This document is the second in a series of interim reports required by a delivery order requesting the development of an Air-Ground Training Feedback System for Low Intensity Conflict issued under Army Research Institute Contract MDA 903-92-D-0075. The purpose of this paper is to identify the doctrinal and operational mission battle tasks for close air support (CAS) in a low intensity conflict (LIC) as it is employed at the Joint Readiness Training Center (JRTC), Fort Polk , Louisianna.

INTRODUCTION

As the Airland Battle doctrine continues to evolve, the need for enhanced coordination between the ground and air forces becomes ever more critical. To meet this requirement the military has instituted a number of organizational reforms, such as unified commands and an emphasis on staff training in interservice operations. The Gulf War further highlighted the need for increased training at the tactical level.

Interservice ground-air training is conducted at various levels at all the Combat Training Centers (CTCs). The National Training Center (NTC) is linked to Air Forces's Air Warrior I program which supplies CAS in a mid-high intensity combat training environment. The JRTC is supported by Air Warrior II which provides CAS in a LIC environment. The training scenarios at both locations provide adequate maneuver and air space to provide realistic training to both ground and air forces.

The increased emphasis on interservice operations and the availability of the Combat Training Centers that employ Airland Battle scenarios make it both practical and worthwhile to develop an air-ground training feedback system, with the results organized into a common database that would facilitate access to information by both the Army and Air Force. Previous tasking under the above mentioned contract has been directed at the development of a training feedback system for CAS in mid-high intensity conflicts. This study was designed to continue the analysis of the utilization of close air support by focusing on the use of close air support in a low intensity conflict. The development, and ultimate use, of these training feedback tools provides a quantifiable basis for further training resource requirements.

The first step in this continued analysis is the identification of the critical tasks necessary for the successful employment of close air support during low intensity operations. This report addresses the methodology for identifying those critical mission battle tasks and provides the resultant task list.

METHODOLOGY

The procedures used to identify the CAS task list, as applied in low intensity operations are discussed below. A model consistent with the one constructed for the CAS mid-to-high intensity study was used to provide a framework for identifying and analyzing the CAS battle tasks. A front end analysis was conducted to identify the specific criteria for battle task performance. The candidate task list developed was verified through interviews with subject matter experts (SMEs) at JRTC. The task list was modified based on those interviews and then reconfigured into forms suitable for the assessment of CAS employment during an exercise, in anticipation of the required field test of the measurement system. This sequence of activity is illustrated in Figure 1.

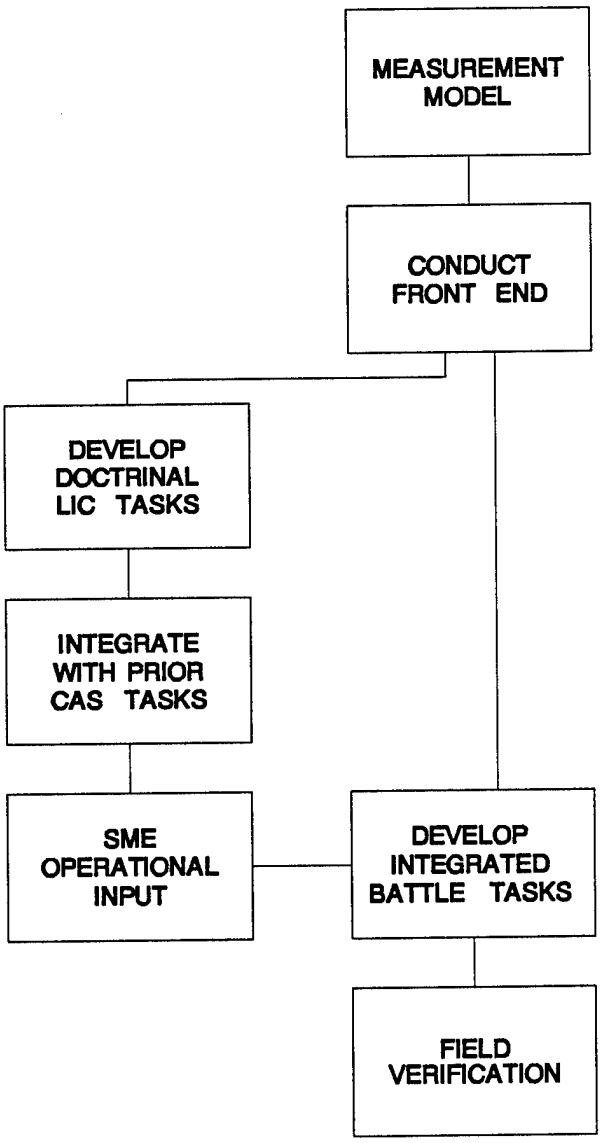


Figure 1: CAS Task List Development Sequence

MEASUREMENT SYSTEM CRITERIA MODEL

A review of A Measurement Model Supporting The Air-Ground Training Feedback System (Keesling, 1992) established that the model developed for the Air Ground Training Feedback System for Close Air Support [a study of CAS in a mid-high intensity conflict] (Root, in progress) was compatable with CAS low intensity conflict. This measurement model identified two main areas in which performance measures must be developed. The first was "Process measures" which examine the tasks that commanders and units must perform to synchronize and apply the air-ground assets effectively. The second was "outcome measures" which examine the effects of the air-ground systems on the battlefield.

Figure 2 shows a conceptualization of the measurement model. It depicts the use of doctrinal and operational information sources to develop process measures. These process measures are in the form of battle tasks which must be performed by both the Army and Air Force elements involved in the unit's planning and execution of CAS. The performance measures are linked to the outcome measures with an arrow which shows that variations in the performance of the process tasks will result in variations in the outcomes. The results of both the process and the outcome measures are then shown feeding into four separate areas or functions: providing AAR input to Army/Air Force units; providing lessons learned for the Army/Air Force; making revisions to the measurement system; and, building a research database to provide data for DOTML (Doctrine, Operations, Training, Materiel, and Leadership) decisions.

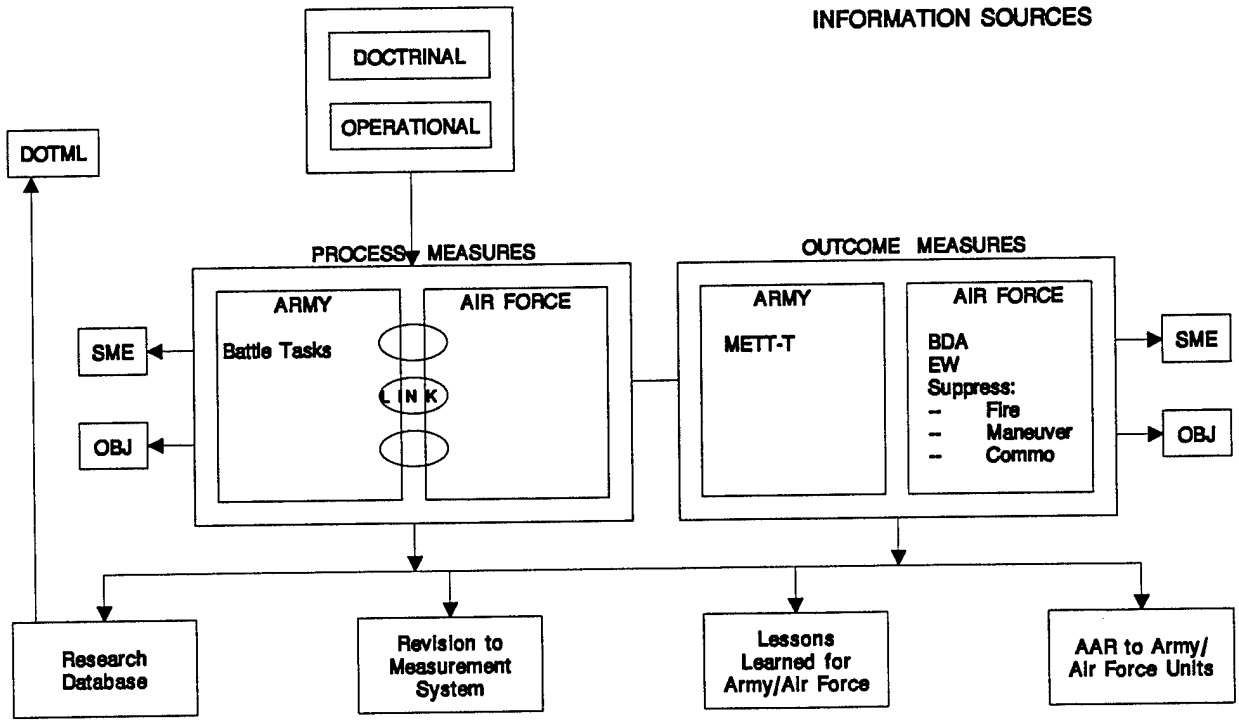


Figure 2: Schematic organization of the battle task and Outcome measurement model for the Air-Ground training feedback system

This model then provides an operational structure with which to organize the low intensity conflict CAS measurement system. An analysis of the model's framework identifies the need for both objective and subject matter expert, or subjective, inputs to both the performance and the outcome measures. Those inputs include the performance of the close air support battle tasks (unit's planning, preparation, and execution activities), the resultant mission outcomes (tactical mission success or failure, bomb damage, aircraft casualties, etc.), and mission conditions (weather, terrain, type mission, etc). An additional consideration was the current training feedback processes (after action reviews, mission debriefs, etc.) being used at the JRTC, Fort Polk, and Air Warrior II, Barksdale AFB, Louisianna.

The data format for the CAS task list for low intensity conflict was also designed to be compatible with the Combined Arms Battle Tasks mission books and other analytical tools in use at the Combat Training Center Archive.

FRONT END ANALYSIS OF THE INTEGRATED ARMY-AIR FORCE SIMULATED COMBAT ENVIRONMENT AT THE JRTC.

A. DOCTRINAL REVIEW

A detailed examination of current doctrine and past studies of combat training processes was done to aid in the identificatin of critical CAS activities in a low intensity environment. Army and Air Force field manuals applicable to close air support, airspace management, air operations and fire support, were reviewed for applicable task identification. The list below shows the primary documents reviewed to identify the CAS battle tasks for low intensity. Along with the doctrinal documents, two past studies were used in developing an outline of critical activities necessary for this project. These two studies were the Unit Performance Measurement System (UPMS, later called the Combined Arms Battle Tasks) which was developed to capture and measure ground combat training processes; and the List of Brigade Critical Combat Tasks for the Air Ground Training Feedback System which developed a battle task list for CAS in mid-high intensity conflicts.

Field Manuals

FM 1-111	Aviation Brigade
FM 6-20	Fire Support in the Airland Battle, May 1988
FM 6-20-10	Tactics, Techniques, and Procedures for the Targeting Process, March 1990
FM 6-20-30	Fire Support for Corps and Division Operations, October 1989
FM 6-20-40	Fire Support for Brigade Operations, January 1990
FM 6-20-50	Fire Support for Brigade Operations (Light), January 1990
FM 7-98	Operations in a Low-Intensity Conflict, October 1992
FM 44-3	Air Defense Artillery Employment, Chaparral/Vulcan/Stinger, June 1984
FM 44-31	Tactics, Techniques, and Procedures: Avenger Squad Operations, June 1990
FM 71-123	Tactics and Techniques for Combined Arms Heavy f\Forces: Armored Brigade, Battalion Task Force, and Company/Team, September 1992
FM 90-15	J-SEAD Multi-Service Procedures for the Joint Suppression of Enemy Air Defenses, June 1990 (TACP 50-23)
FM 90-20	J-Fire Multi-Service Procedures for the Joint Application of Firepower (TACP 50-28)
FM 90-21	JAAT Multi-Service Procedures for Joint Air Attack Team Operations, October 1991 (TACP 50-20)
FM 100-20	Military Operations in Low Intensity Conflict, December 1990
FM 100-28	Doctrine and Procedures for Airspace Control in the Combat Zone, December, 1975
FM 100-103	Army Airspace Command and Control in a Combat Zone, October 1987
TACP 50-22	Tactical Air Control Party/Fire Support Team Close Air Support Operations
	MCM 3-3, Vol VIII Multi-Command Manual, Mission Employment Tactics AFAC and TACP (Draft)
ARTEP 71-3-MTP	Mission Training Plan for the Heavy Brigade command Group and Staff, October 1988

B. Battle Task Measurement System for Close Air Support:

The battleflow framework codified in the UPMS study provided the structural basis for this study. The UPMS framework was utilized in the Air Ground Training Feedback System for Close Air Support (Root, ongoing) and its use was continued in this study to insure compatability of data and standardization of major tasks to the extent possible to facilitate future analysis. The UPMS study establishes a logical battle flow of *plan-prepare-execute* and provides the foundation for specific *input-process-output* tasks as they occur throughout a mission. By using this organization, the tasks that have been identified and developed for CAS in low intensity operations can be linked to the tasks identified for CAS in the mid-high intensity environment and to the maneuver unit tasks constructed in the UPMS study. This will eliminate potential task redundancy and provide the appropriate integration with ground maneuver battle tasks. Figure 3 illustrates the *plan-prepare-execute* mission flow.

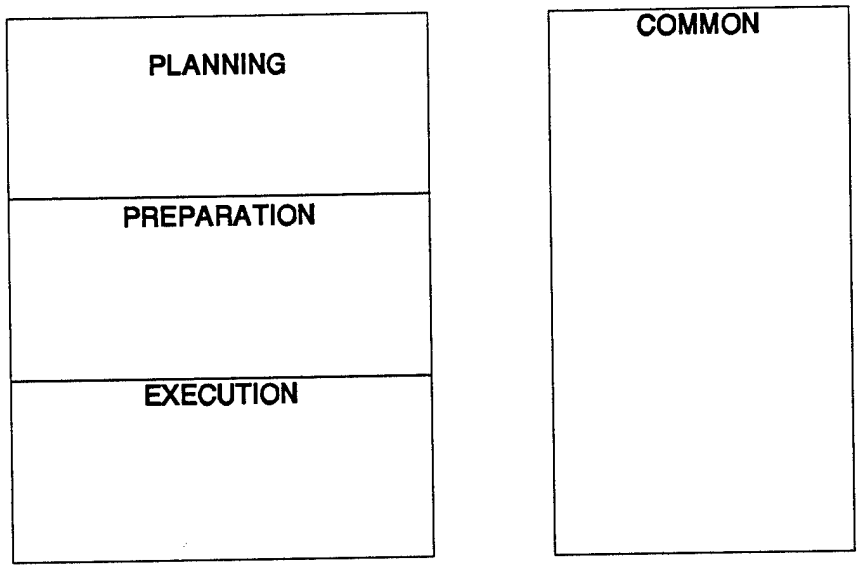


Figure 3: The Battleflow Framework

Operational Echelon:

While the UPMS study focused on the battalion task force and below for its analysis of maneuver unit tasks, the initial Air Ground Training Feedback System for Close Air Support study determined that the brigade echelon was the most appropriate for an analysis of Close Air Support employment. Three reasons justify this choice: the brigade being the lowest echelon that routinely integrates a wide variety of supporting arms (specifically those involved in CAS) into a synchronized maneuver plan, the brigade is the highest echelon able to physically manage CAS due to its proximity to forward line of troops (FLOT), and Brigades are the level of organization currently being trained at the CTCs. For these reasons, the brigade echelon was also selected as the base organization for this study.

Tactical Organization:

Prior studies have identified the tactical air control party (TACP), the air forward air controller (AFAC), and the attack aircraft as the three operational components of close air support. The doctrinal review for this study indicates the TACP's operations and responsibilities are so closely tied to input from the maneuver unit that the maneuver unit (brigade) staff (primarily the operations and fire support elements) must also be considered as a fourth operational component. As in the previous study, this study concentrates on the command and control elements (TACP, AFAC, and the brigade staff) that are primarily responsible for ensuring CAS synchronization and effectiveness.

Doctrinally, TACP teams are located at both the brigade and the battalion task force level. The TACP consists of an air liasion officer (ALO) and two enlisted tactical air command and control specialists (TACCSs), at least one of which is qualified as an enlisted terminal attack controller (ETAC). At brigade, the TACP team has an additional ALO. The ALO serves as a special staff officer and as part of the fire support element of the staff. He is an integral part of the unit's planning and preparation process for fire support and is the critical link between the maneuver unit and the supporting attack aircraft.

The AFAC usually arrives in the operational area just prior to the arrival of the attack aircraft. His initial briefing will have been the result of information passed from the unit through the division and corps to the departure airfield. The ground liasion officer (GLO) at that location will have given the AFAC and the attack pilots a broad operational briefing on the ground situation and an intelligence update. Upon arrival in the operational area, the AFAC must receive a detailed update on both the intelligence and the ground tactical situation from the TACP. The AFAC will then pass the critical elelments of the update to the attack pilots and will provide direct command and control over the attack aircraft, once they arrive.

At the same time this parallel planning and preparation process between the TACP and the AFAC is being conducted, the brigade is also doing its detailed planning and preparation for both the ground maneuver and fire support of the maneuver plan. Hence, there are three independent, but parallel, planning and preparation processes that must be intertwined, coordinated, and synchronized to successfully employ close air support. The task list reflects this interacting, but separate, operational requirement.

This task list is organized into sections that coincide with the tactical organization described above. There is a section for the maneuver unit's planning and preparation tasks, a section for the TACP's planning and preparation tasks, a section for the AFAC's pre-flight planning and on station preparation tasks, and a section for execution tasks. The organization and numbering of the tasks within each section is described later in this report.

Development of Battle Tasks for Close Air Support in a Low Intensity Conflict:

The process had two steps: 1) A review of doctrinal and other sources to develop a candidate task list, and 2) A review of the candidate task list by observer/controllers (O/Cs) at JRTC. The overall sequence for this process was to first analyze doctrinal processes, particularly those applicable to low intensity operations and to fire support, which provide the organizational structure of the mission. This analysis allowed identification of specific activities or tasks instrumental to the accomplishment of the mission. Once these activities were identified, the resulting tasks were integrated with the existing task list from the initial Air Ground Training Feedback System for CAS study to produce a draft task list for CAS in a low intensity conflict. This draft task list was then used as the focus of interviews and discussion groups with selected observer/controller personnel at JRTC to examine the operational processes that reflect the modifications and refinements of doctrinal principles as they are applied under field conditions. Both doctrinal and operational components were then integrated into a complete list of critical battle tasks for close air support in a low intensity conflict.

Doctrinal Battle Tasks for Close Air Support:

The employment of close air support is an integral part of the Airland Battle doctrine. Its effective application in the fast moving and dispersed environment envisioned for future low intensity battlefields requires substantial coordination and synchronization. In order to ensure that the Close Air Support enhances the ground tactical plan, both the air and ground coordinating staffs must be actively involved. The procedures for determining the appropriate level of CAS support and the coordinating mechanisms between ground and air elements was a particular focus of this study.

Using the previously developed CAS battle task list for mid-high intensity conflict as an initial list, the doctrinal review identified additional tasks and sub-tasks necessary to tailor the task list for low intensity operations. Some of the additional tasks identified were applicable to both mid-high and to low intensity conflicts. All of these tasks were added to the original mid-high intensity task list to modify the overall list for application in low intensity operations at the JRTC.

Upon completion of the field verification test of the low intensity CAS task list, the validated task list will be integrated with the mid-high intensity list. This will produce one CAS task list for use in both types of conflict. The consolidated list will contain some sub-tasks that are only applicable to one type conflict. These few sub-tasks can be marked "not applicable" when the list is being used to assess CAS during the other level of conflict.

Once the initial planning, preparation, and execution task lists for the TACP and AFAC were identified, the doctrinal literature review was continued to identify those maneuver unit tasks, functions, or responsibilities necessary for the planning, preparation, and execution of CAS. Many items identified in the TACP tasks required information or coordination that could only come from, or through, the maneuver unit. A primary goal of the doctrinal review was to identify the maneuver unit tasks required for the successful coordination and synchronization between the supported unit and the supporting TACP elements. One key element identified for the success of this effort was the development of a comprehensive airspace management plan or army airspace command and control (A2C2) plan. Other critical requirements were the establishment of communications between the TACP and the maneuver units; the integration of the TACP into the unit's fire support planning, preparation, and synchronization activities; and the maneuver unit's battle tracking of friendly unit positions and activities.

This task list provides the structure for the timely and complementary employment of close air support and all other fire support elements (indirect fires, helicopters, and air defense assets) which are all competing for the same airspace. It also provides the structure for identifying those maneuver unit tasks that are critical to the coordination and synchronization of maneuver and close air support.

Operational Battle Tasks for Close Air Support:

Once the overall doctrinal framework and initial task list for close air support in LIC was developed, it was necessary to examine how the doctrine was operationalized in the field. In order to determine what tactics, techniques, and procedures needed to be applied to conduct actual operations, interviews were conducted with selected observer/controller personnel from the JRTC at Fort Polk, LA. Experience from similar studies indicated that field procedures would provide detailed measures of both how and when a designated critical activity occurs, as well as helping to fix responsibility for particular actions at the operational unit level.

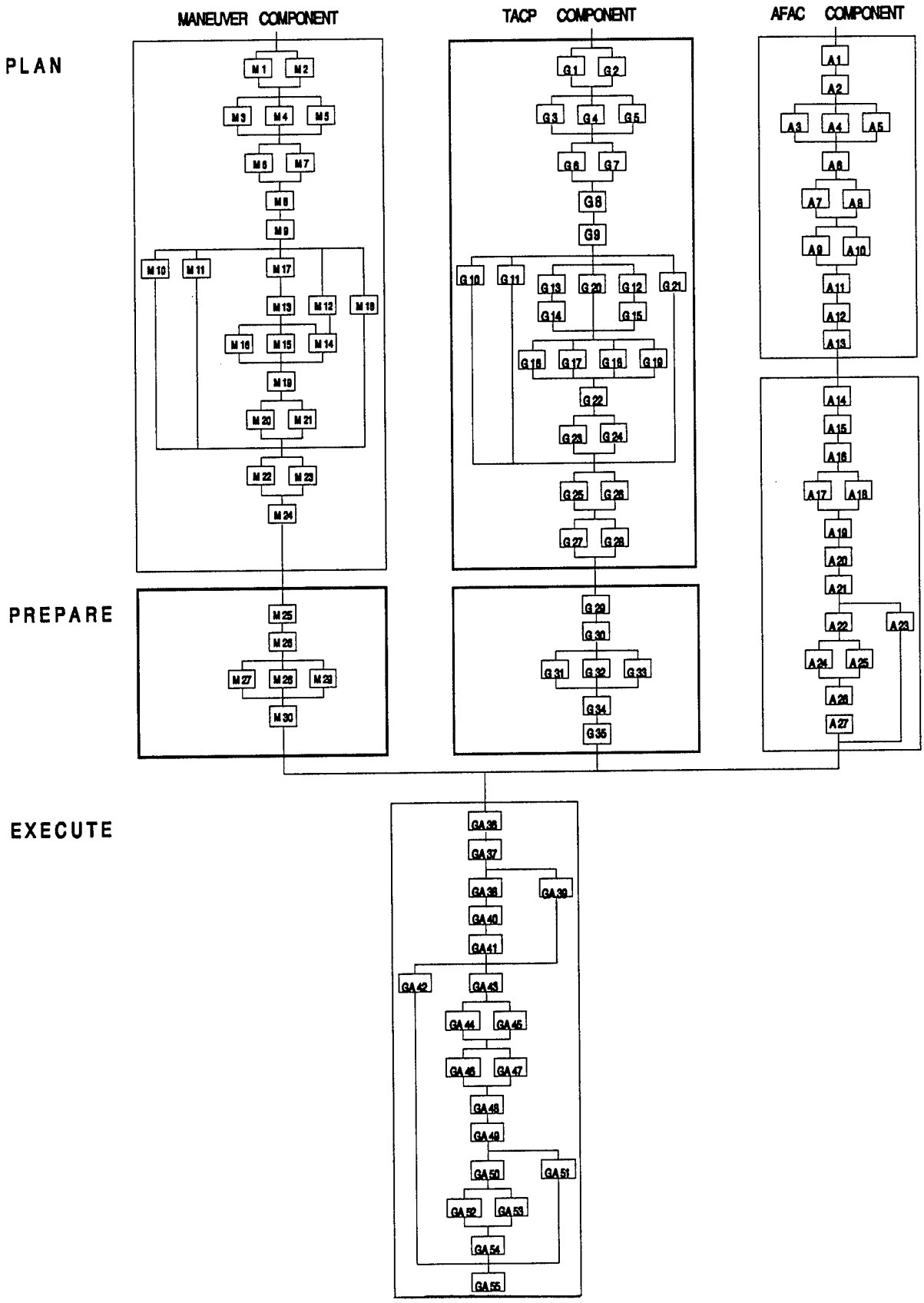
A group briefing on the draft close air support battle task list for low intensity conflict and individual interviews was conducted at JRTC. Representatives from JRTC Plans (Exercise Management Control Center), JRTC Operations Group (Training Analysis Feedback Facility), aviation, airspace management, air defense, fire support, and Air Force TACP attended the briefing. Those inteviews resulted in a substantial number of comments and recommendations on how the task list needed to be modified to be more applicable to low intensity and the JRTC's, operations.

Integration of Doctrinal and Operational Battle Tasks:

The results of those interviews were then integrated into the draft task list. The major impact of the interviews was to emphasize the criticality of the maneuver unit's tasks in coordinating and synchronizing the overall maneuver - close air support efforts. The direct result on the integrated task list was an expansion of the maneuver unit tasks. There was a direct correlation between the maneuver unit's requirements to accomplish some effort or provide some information and the TACPs requirements to acquire some information or to coordinate/assist in some effort.

Once the process of merging and collating battle tasks and assigning appropriate subordinate elements of information and measures of effectiveness was completed, copies of the integrated task list were sent to the interview participants for further comments. The completed task list (still considered a draft) was then converted into a data collection format for use in the field verification of the task list. Purposes of the field verification were to confirm that the identified battle tasks were correctly stated, that the corresponding elements of information were appropriate measures of effectiveness, and that the appropriate staff element/special staff member/operator was identified as responsible for the task. A copy of the reduced size task list booklets that were prepared for the verification test and a detailed description of the booklets and their organization will be reported separately with the results of the field verification.

MANEUVER AND TACP CLOSE AIR SUPPORT TASK SEQUENCE



Development of the Mission Battle Task Matrix:

The mission battle task matrix developed in the UPMS study provides the structure for organizing the close air support battle tasks. As the battle tasks for CAS were identified and confirmed, they were placed into a structure representing the operational environment in which they are applied. As articulated in the UPMS study, the three components of this structure are the mission conditions, sequence of actions, and the synchronizing mechanisms between activities. This report will address only the sequencing of actions. The remainder of the battle task matrix development will be addressed in a later report.

The battle tasks were organized into an event sequence that corresponds to the operational flow of a mission. Use of this configuration provided the logical steps which must occur during the mission, and it placed each battle task into the context of the critical path of the organization's input, process, and output activities. By organizing the battle tasks in this manner, the identification of task clusters, internal linkages and task dependencies was possible. Figures 4 and 5 show the initial list of critical mission battle tasks for close air support in a low intensity conflict sequenced in the plan-prepare-execute framework.

With the battle tasks for CAS organized into the mission flow context, it is possible to integrate these activities into the battleflow framework already constructed for the ground maneuver forces (UPMS). This integration then provides linkages from the supporting air component to the supported ground component that translate into combined arms synchronization. This organization also allows linkages to be made to higher and lower echelon ground forces since they all utilize the plan-prepare-execute formula.

Appendix A is the Battle Task List for Close Air Support in a Low Intensity Conflict.

The next step in the overall development of the Air Ground Training Feedback System for Low Intensity Conflict is to conduct a field verification test of the attached task list at JRTC. Upon completion of that test, the low intensity list will be integrated with the mid-high intensity list to produce one CAS task list. That list will then be used in a similar field verification test to be conducted at NTC. The verification test will also include a verification test of the Out Come measure data collection system. The results of that test will be used to finalize the CAS task list. The final version of the CAS database, to include some pre-formatted reports, will be completed. This will complete the link-up of the process and outcome measures and the establishment of the research database as shown in Figure 2.

APPENDIX A:

BATTLE TASKS FOR CLOSE AIR SUPPORT TASK LIST IN A LOW INTENSITY CONFLICT

1. The attached task list for employment of close air support (CAS) in a low intensity conflict consists of four sections: Brigade Maneuver, TACP Brigade, AFAC, and Execution. Each of the first three sections is further divided into a "planning" section and a "preparation" section.

2. Each section is numbered with a one or two letter code to distinguish that section's tasks from the same number or same titled tasks from another section.

3. The sections are coded as follows:

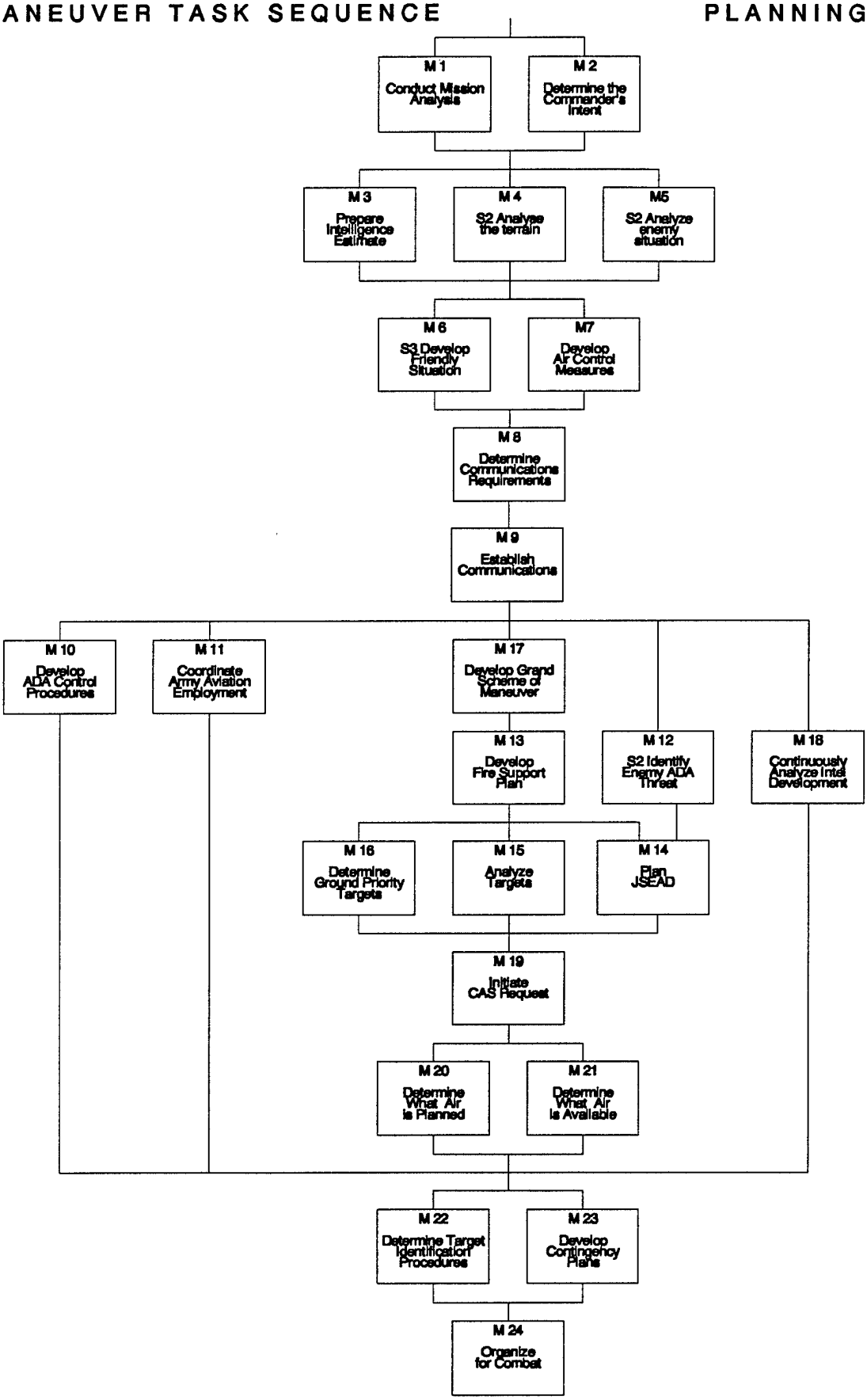
   a. Maneuver task numbers are preceded by the letter "M".

   b. TACP tasks are preceded by the letter "G".

   c. AFAC tasks are preceded by the letter "A".

   d. Execution tasks, some of which are performed by personnel involved in each of the other sections, are preceded by the letter "GA". The numbering sequence of the execution tasks follows the TACP tasks (G35 is the last TACP task, GA36 is the first execution task).

MANEUVER TASK SEQUENCE PLANNING



CLOSE AIR SUPPORT TASK LIST
BRIGADE MANEUVER

PLANNING

M1. **Conduct mission analysis** (AMTP 71-3, Task 71-3-3001; FM 101-5)
- a. Determine specified tasks.
- b. Determine implied tasks.
- c. Determine area of operations (sector/zone).
- d. Determine available time.
- e. Identify specific Rules of Engagement (ROE) that apply to CAS/air operations.

M2. **Determine the commander's intent** (AMTP 71-3, Task 71-3-9001; FM 101-5)
- a. Understand the purpose of the mission.
- b. Understand commander's intent for CAS.

M3. **S2 prepares Intelligence Estimate** (AMTP 71-3, Task 71-3-2001; FM 34-1)
- a. Perform IPB and identify all available information and intelligence on enemy forces, terrain, and weather.
- b. Determine availability of air intelligence assets in addition to normal resources.
- c. Request continuous flow of combat information from aircraft to S2.
- d. Ensure continuous flow of new intelligence to the Air Liaison Officer.
- e. Request G2 input on deep enemy ADA threat.
- f. Coordinate with TACP if not receiving pilot tactical information.

M4. **S2 analyze the terrain** (AMTP 71-3, Task 71-3-2001, 2003; FM 34-1)
- a. Determine ground avenues of approach, choke points, and obstacles.
- b. Identify air avenues of approach.
- c. Determine the impact of weather on air operations.

M5. **S2 analyze the enemy situation** (AMTP 71-3, Task 71-3-2001, 2003, 2005; FM 34-1)
- a. Determine size, disposition, location, and organization of enemy forces.
- b. Identify current and anticipated enemy ADA capabilities, locations, and activities.
- c. Identify potential courses of action.
- d. Determine impact of weather on enemy ADA.
- e. Pass targeting data to S3/FSO.

M6. **S3/FSO develop/provide friendly situation** (AMTP 71-3, Task 71-3-3002, 3003, 3007, 3011, 9002)

[Note: Battle tracking by maneuver unit/S3 and up to date knowledge of location of all subordinate elements is critical in LIC environment. Use of traditional FLOT and FSCL concepts of control may be difficult.]
- a. Identify and provide location of forward elements, Forward Line of Troops (FLOT) if applicable.
- b. Identify location of indirect fire assets, to include artillery, mortars, and Naval gunfire.

c. Identify helicopter areas of operation (AO), to include routes, lift, and attack operations.
d. Identify UAV (Unmanned Air Vehicle) AOs.
e. Determine and provide location of the FSCL (Fire Support Coordination Line) and/or any other indirect fire restrictions, such as no fire lines (NFL) or unit battle positions (BPs).
f. Identify Host country fire restrictive measures.
g. Provide friendly maneuver plan, tactical situation, choke points, trigger points for air requests, timing of battle, and how battle tracking is being done.

M7. **A2C2 element identify or develop air control measures** (AMTP 71-3, Task 71-3-3012, 3013, 602, 7001, 9002; FM 100-103)
[Note: Airspace control plan is developed between JTF and Host nation FAA/Air Traffic Control. Brigade and/or task force must identify existing control measures and develop additional measures to control air operations within the unit's airspace.]
a. Identify area for which the brigade is responsible (vertical, left, and right limits).
b. Identify users of the airspace and their requirements (army aviation, air force, artillery, ADA, etc.).
c. Identify areas impacting on air operations.
    1) Aviation unit and FARP locations.
    2) Artillery locations and planned fires.
    3) RPV launch and recovery sites and flight paths.
    4) ADA locations, engagement zones, and coverage.
    5) Positions of instrument landing systems, navigation aids (NAVAID), flight coordination center (FCC), and flight operations center (FOC).
d. Identify user priorities, restrictions, and control measures.
    1) Confirm coordinating altitude (from above ground level (AGL))
    2) Confirm air ROE.
    3) Identify and locate civilian airline routes.
    4) Determine restrictions and constraints such as "no fly zones".
e. Identify or designate the following areas:
    1) High density airspace control zone (HIDACZ).
    2) Restricted Operations Zones (ROZ).
    3) Air ingress/egress routes.
    4) Airspace Coordination Areas (ACA).
    5) Contact Points/Initial Points (CP/IP).
    6) Helicopter air corridors.
    7) Minimum Risk Routes (MRR).
    8) Engagement Areas (EAs).
f. Identify/designate ROZs for air resupply areas/times for both air drop and air land operations.

M8. **Determine communication requirements** (AMTP 71-3, Task 71-3-1101)
a. Identify locations which provide continuous communications with ground and air forces.
b. Determine communications requirements with ground forces, air forces and Army avn.

c. Identify ground retransmission requirements.
d. Coordinate with TACP to use AFAC as communications relay, if necessary.

M9. **Establish communications** (AMTP 71-3, Task 71-3-1102)
a. Request air force frequencies (in ATO) and provide to army aviation and others, as required.
b. Coordinate for, and ensure distribution of, authentication tables [AKAC 1553] to army and air force elements, as needed).

M10. **Develop Air Defense Artillery control procedures** (AMTP 71-3, Task 71-3-3007, 6001, 6002)
a. Coordinate ADA operations through the S3.
b. Identify location and status of ADA units in brigade area.
c. Identify Air Defense Artillery (ADA) activation procedures (FM early warning net to stinger teams).
d. Maintain current ADA status and identify ADA changes of status/control measures and procedures.
e. Identify air ingress/egress routes
f. Identify Restrictive Operation Areas (ROAs) and weapons free zones.

M11. **Coordinate Army Aviation employment** (AMTP 71-3, Task 71-3-3011, 3012, 7001; FM 1-100; FM 1-111)
a. Identify responsibilities, aviation tasks and plans.
b. Identify constraints/limitations in altitude and routes.
c. Determine capabilities, type aircraft, callsigns, commmunications, and authenticators.
d. Identify ROE.
e. Identify engagement areas.
f. Identify critical locations, such as:
    1) Landing zones.
    2) Forward Arming and Refueling Points (FARP).
    3) Battle Positions (BPs).
    4) Aerial observation positions (AOPs).
g. Identify Joint Air Attack Team (JAAT) specific considerations.
h. Aviation assets are incorporated into priority of fires and JSEAD operations.

M12. **S2 determine enemy ADA threat** (AMTP 71-3, Task 71-3-2003, 2005)
a. Identify type and capabilities of enemy ADA systems (type munitions and anticipated targets).
b. Determine locations of enemy ADA systems.
c. Determine past and expected activities (movement/remain stationary) of enemy ADA systems.
d. Pass targeting data to S3/FSO for JSEAD planning.

M13. **Develop fire support plan** (AMTP 71-3, Task 71-3-3009, 3012, 9001, 9002; FM 6-20) [Note: In the LIC environment there is less need to mass fires, therefore, a reduced need for the control measure necessary to execute simultaneous artillery and CAS fires on the same target.]

a. FSO advises on fire support capabilities, limitations, and coordinating measures.
b. ALO is part of the fire support team and advises on air capabilities and limitations.
c. FSO and ALO coordinate on aircraft availability, munitions, capabilities, and effects.
d. FSO includes CAS in the fire support execution matrix.
e. Primary concept for control measures in LIC is to separate artillery and CAS by time for the same target or by terrain feature for simultaneous delivery on different targets.
f. Fire support control measures are established.
    1) Battle positions for army aviation.
    2) No fire lines (NFL) and azimuth restrictions for artillery/mortars.
    3) Engagement areas (EAs) identified by terrain features for CAS.
    4) Other measures such as FSCL, restrictive fire line (RFL), coordinate fire line (CFL), no-fire area (NFA) and restrictive fire area (RFA) established as appropriate.
g. Artillery is positioned to not interfere with air lines of communication/field landing strip operations.
h. Fire support system is prepared to shut down operations for critical CAS attacks.
i. The following information is identified and maintained:
    1) Location of indirect fire assets.
        a) Artillery guns.
        b) Mutiple Launched Rocket Systems.
        c) Mortars.
    2) Capabilities of indirect fire assets.
    3) Missions, planned targets, and gun-target lines.
    4) Sequence of engagement.
    5) Maximum ballistic altitudes.
    6) Movement sequence (timing and new locations).
    7) ACAs.
    8) JAAT considerations.

M14. **Plan JSEAD (Joint Suppression of Enemy Air Defenses)** (AMTP 71-3, Task 71-3-2006,
3004, 9001, 9002)

a. S2 identifies enemy ADA system/targets.
b. Determine ADA target locations.
c. Determine type of suppression.
d. Determine type of JSEAD available.
e. Integrate JSEAD with adjacent units.

M15. **Analyze targets** (AMTP 71-3, Task 71-3-2003, 2006, 3004, 9003, 9004; FM 6-20)

a. S2 identifies enemy locations.
b. Determine target type, ALO recommends targets for CAS attack.
c. Determine the best method to defeat enemy targets.
    1) Determine constraints imposed by munitions available and ROE.
    2) Match munitions to type targets.
d. Identify appropriate JSEAD requirements.
e. Identify necessary suppression measures and appropriate suppression systems.
f. Identify the impact of weather on air operations and enemy ADA.
g. Establish engagement criteria.
h. Determine methods to identify friendly locations.
i. On receipt of ATO information, ALO/FSO coordinate immediate 12 hour period and identify:
    1) Number and type of aircraft/munitions.
    2) Targets appropriate to aircraft and munitions.

M16. **Determine ground priority targets** (AMTP 71-3, Task 71-3-3005)

a. S3/FSO establish target priorities.
b. ALO recommends priorities for air attack.
    1) Identify target type
    2) Integrate target with threat to friendly forces, determining risk to air assets and risk of fratricide.

M17. **Develop ground scheme of maneuver** (AMTP 71-3, Task 71-3-3001, 3002, 3004, 3009)

a. Identify forward line of troops (FLOT) and/or battle positions (BPs).
b. Identify location of elements forward of the FLOT or operating independently (ie. scouts).
c. Designate methods of marking friendly troop locations (Glint tape, VS-17 panels, smoke, etc.)
d. Designate engagement areas (EAs) (designated areas with no friendly troops).
e. Establish maneuver restrictions, such as boundaries, axis of advance, and limitations.
f. Designate other control measures on troop movement or location, as required.

M18. **Continuously Analyze Intelligence Developments** (AMTP 71-3, Task 71-3-2003, 2006)

a. Integrate strategic and higher echelon information and intelligence from all sources, such as:
    1) JSTAR.
    2) U2/TR1.
    3) Div/Corps G2.
b. Integrate information and intelligence from own unit's assets, such as:
    1) Reconnaissance elements/scout platoon.
    2) Ground assets/maneuver units.
    3) Immediate tactical information observed by aircraft in the area.
    4) Other available assets.
c. Disseminate targetable information to the FSE.

M19. **Initiate Close Air Support (CAS) request** (AMTP 71-3, Task 71-3-3--4, 3009; FM 90-21)

a. Request supports ground scheme of maneuver.
b. Request supports fire support plan.
c. Request conforms to intelligence estimate.
d. S3, with ALO advice and assistance, identifies preplanned air requirements and prepares request.
e. If preplanned, request contains desired air control measures for inclusion in the ATO (ROZs, no fire areas, etc.).
f. If immediate CAS, S3/ALO ensures request contains information necessary to identify requestor; priority; target type, size, and location; time required and desired results.

M20. **Determine what air is planned** (AMTP 71-3, Task 71-3-3004)

a. S3 section obtains information from the ALO on planned air sorties in the ATO.
b. Determine type of aircraft, capabilities and munitions.
c. Determine when the aircraft will arrive and how long aircraft will remain on station.
d. Determine Electronic Warfare (EW) capabilities.
e. Determine projected sortie allocation.

M21. **Determine what air is available** (AMTP 71-3, Task 71-3-3004, 3009)

a. S3 section coordinates with the ALO/TACP to determine the number of air sorties available for planning.
b. Based on the ATO and communications with higher, the TACP identifies all aircraft available in the area during the needed timeframe .
c. S3 section receives information on:
    1) Aircraft, capabilities, and munitions.
    2) When and how long aircraft will be available.
    3) EW assets and capabilities.
    4) Air priority of effort in the AO
    5) Projected tanker support
    6) Projected Airborn Warning and Control System.
    7) Projected fighter coverage
    8) Projected suppression coverage, JSEAD and Weasel.
d. TACP identifies aircraft on the way (2 hours out) and coordinates with S2/FSO on target types and locations, A/C and munitions, and enemy ADA.

M22. **Determine target identification procedures** (AMTP 71-3, Task 71-3-9004; FM 6-20)

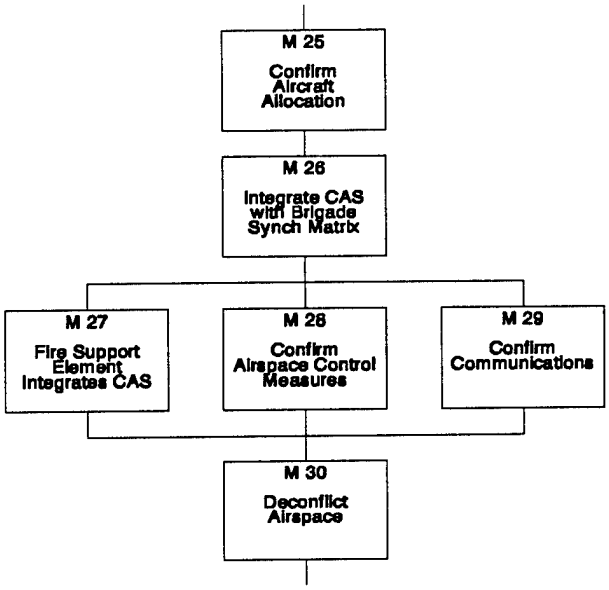
a. S3/FSO, in conjunction with the ALO/TACP, determine target marking procedures
b. Consider the utility of using target marking methods such as laser, smoke, tracers, or target description.
c. Identify easy to locate terrain features.
d. Ensure distinction between target marking and method for marking friendly locations is understood.

M23. **Develop contingency plans** (AMTP 71-3, Task 71-3-3009, 9003, 9004; FM 6-20)

a. Identify secondary targets for CAS.
   1) Identify alternate engagement areas.
   2) Prepare for second echelon engagement.
b. Identify back-up communications (ie. fire support net/radios, relay to AFAC on FM, etc.)
c. Coordinate for emergency control of CAS in event of ALO/ETAC KIA.
d. Determine FSO/FO ability to control CAS in emergency.
e. FSO plans alternate means to engage CAS targets.

M24. **Organize for combat** (AMTP 71-3, Task 71-3-3001, 3002)

a. Establish chain of command.
b. Identify locations provide uninterrupted communication with air and ground forces.
c. Determine position of Air Liaision Officer within the command group for close coordination with the commander (in LIC, probably the TOC).
d. Identify CAS final control authority.


M 25
Confirm Aircraft Allocation
M 26
Integrate CAS with Brigade Synch Matrix
M 27
Fire Support Element Integrates CAS
M 28
Confirm Airspace Control Measures
M 29
Confirm Communications
M 30
Deconflict Airspace

PREPARATION

M25. **Confirm aircraft allocation** (AMTP 71-3, Task 71-3-3004, 3009)
- a. Information on type aircraft, arrival times, munitions, and number of sorties/station time is confirmed as early as possible.

M26. **Integrate CAS with Brigade Synch Matrix** (AMTP 71-3, Task 71-3-3004, 3009, 9002; FM 6-20)
- a. CAS plan conforms with Decision Support Template.
- b. ALO and CAS are integrated into fire support rehearsals.
- c. CAS is synchronized with scheme of maneuver.
  - 1) Timing.
  - 2) Command or event driven sequence.
- d. CAS is synchronized with fire support plan.
  - 1) Timing.
  - 2) Command or event driven sequence.
  - 3) Targets.
- e. CAS is synchronized with Army Aviation.
  - 1) Timing.
  - 2) Battle positions.
  - 3) Engagement areas.
- f. Plan for continuous CAS missions.

M27 **Fire Support Element integrates CAS** (AMTP 71-3, Task 71-3-3004, 3009, 9002; FM 6-20)
- a. CAS plan is incorporated into the indirect fire plan and included in the fire support execution matrix.
  - 1) Sequence of attack.
  - 2) Timing.
  - 3) Engagement areas.
  - 4) Targets.
- b. Masking of indirect fires is minimized.
- c. CAS target list is appropriate for air engagement.
- d. Identify coordination considerations with Army Aviation.
- e. ALO and CAS are integrated into fire support rehearsals.

M28. **Confirm airspace control measures** (AMTP 71-3, Task 71-3-3012, 3013, 6002, 7001, 9002)
- a. Review airspace control order (ACO) and identify any changes to initial plan.
- b. Identify local airspace restrictions for areas, altitude, times, and routes.
- c. Specifically identify ROZs for army aviation operations (FARPs, BPs, etc.).
- d. Monitor status of airfields and specifically identify ROZs for air routes, air drop, and field landing strip resupply operations.
- e. Specifically identify no fire areas due to ROE or friendly ground force operations.
- f. Confirm ADA restricted operations areas (ROAs), weapons free zones, and weapons control status.

M29. **Confirm communications** (AMTP 71-3, Task 71-3-1102)

a. Confirm frequencies from ALO/ATO and distribution of requencies to supported/supporting units.

b. Confirm distribution of proper authentication tables [AKAC 1553] to appropriate units (army aviation, FSO, etc.)

c. Conduct communications check and confirm communications capability with air and ground forces.

M30. **Deconflict airspace** (AMTP 71-3, Task 71-3-3012, 3013, 6002, 7001, 9002; FM 100-103)

[Note: Units below brigade do not usually control enough airspace to perform this function.]

a. ACO provides for deconfliction of overall airspace into brigade AO.

b. Within brigade AO, brigade plan minimizes potential fratricide situations.

c. Brigade plan minimizes the masking of fires for all elements.

d. Plan provides for reaction to aircraft ingressing and egressing the AO.

e. Confirm that all the following assets are operating in concert:

1) CAS.

2) Helicopters (attack, lift, and scout).

3) Indirect fires (artillery, mortars, and naval gunfire).

4) ADA.

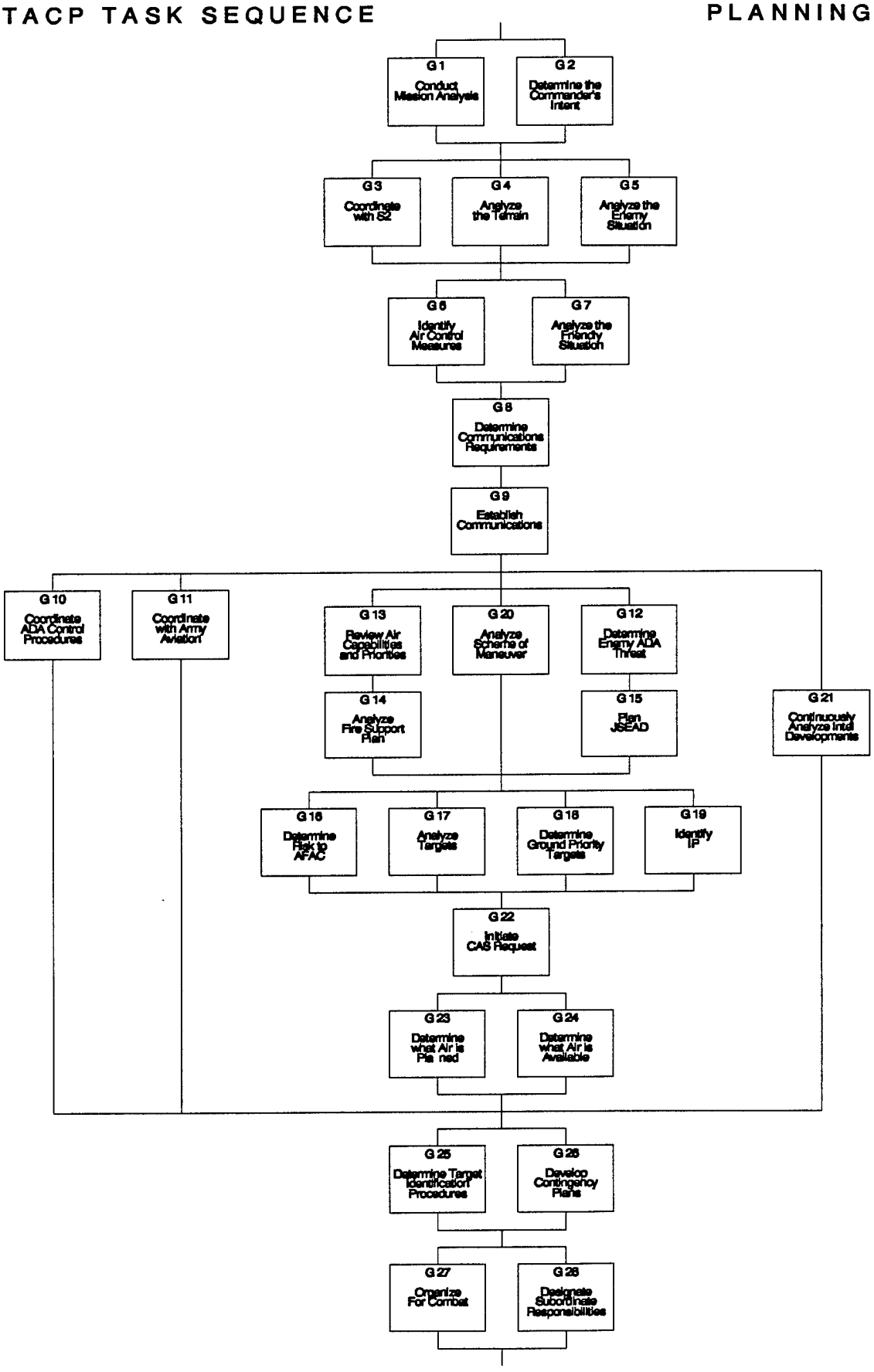
5) UAV.

f. FSO overlays indirect fire asset data (locations, gun target lines, maximum ordinate, etc.) on ACO measures to ensure deconfliction.

g. Monitor planned and outgoing fires.

TACP TASK SEQUENCE

PLANNING



CLOSE AIR SUPPORT TASK LIST
TACP (TACTICAL AIR CONTROL PARTY)
BRIGADE

PLANNING

G1. **Conduct mission analysis** (MCM 3-3, Vol VIII)
- a. Determine specified tasks.
- b. Determine implied tasks.
- c. Determine area of operations (sector/zone).
- d. Determine available time.
- e. Identify specific Rules of Engagement (ROE) that apply to CAS/air operations.

G2. **Determine the commander's intent** (MCM 3-3, Vol VIII)
- a. Understand the purpose of the mission.
- b. Understand commander's intent for CAS.

G3. **Coordinate with S2** (MCM 3-3, Vol VIII)
- a. Identify all available information and intelligence on the following:
  - 1) Enemy forces.
  - 2) Terrain.
  - 3) Weather.
- b. Determine what air intelligence assets are available.
- c. Ensure continuous flow of combat information from aircraft to the S2.

G4. **Analyze the terrain** (MCM 3-3, Vol VIII)
- a. Determine ground avenues of approach, choke points, and obstacles.
- b. Identify air avenues of approach.
- c. Determine the impact of weather on air operations.
- d. Identify physical control features.
- e. Determine the impact of the sun angle on air operations.
- f. Determine the elevation of targets in feet.

G5. **Analyze the enemy situation** (MCM 3-3, Vol VIII)
- a. Determine size, disposition, location, and organization of enemy forces.
- b. Identify current and anticipated enemy ADA capabilities, locations, and activities.
- c. Identify potential courses of action.

G6. **Identify air control measures** (MCM 3-3, Vol VIII; ATP 40; FM 100-103)
- a. Confirm coordinating altitude (from above ground level (AGL))
- b. Confirm air ROE.
- c. Identify and locate civilian airline routes.
- d. Determine restrictions and constraints such as "no fly zones".
- e. Identify or designate the following areas:
  - 1) High density airspace control zone (HIDACZ).
  - 2) Restricted Operations Zones (ROZ).
  - 3) Air ingress/egress routes.

4) Airspace Coordination Areas (ACA).
5) Contact Points/Initial Points (CP/IP).
6) Helicopter air corridors.
7) Minimum Risk Routes (MRR).
8) Engagement Areas (EAs).

f. Identify/designate ROZs for air resupply areas/times for both air drop and air land operations.

G7. **Analyze friendly situation** (MCM 3-3, Vol VIII)

[Note: Battle tracking by maneuver unit/S3 and up to date knowledge of location of all subordinate elements is critical in LIC environment. Use of traditional FLOT and FSCL concepts of control may be difficult.]

a. Identify location of forward elements, Forward Line of Troops (FLOT) if applicable.
b. Determine location of indirect fire assets, to include artillery, mortars, and Naval gunfire.
c. Identify helicopter areas of operation (AO), to include routes, lift, and attack operations.
d. Identify UAV (Unmanned Air Vehicle) AOs.
e. Determine location of the FSCL (Fire Support Coordination Line) and/or any other indirect fire restrictions, such as no fire lines (NFL) or unit battle positions (BPs).
f. Coordinate with S3 on friendly plan, tactical situation, choke points, trigger points for air requests, timing of battle, and how he is tracking unit locations, etc.

G8. **Determine communication requirements** (MCM 3-3,Vol VIII;TAC Pam 50-20)

a. Identify locations which provide continuous communications with ground and air forces.
b. Determine communications requirements with ground forces, air forces, and army aviation.
c. Identify ground retransmission requirements.
d. Coordinate/control commmunications with the AFAC to avoid over tasking if necessary to use as a communications relay.
e. Develop air communication contingency plan.
   1) HAVE-Quick (TOD, Mickey) frequency jumping equipment.
   2) Chattermark (pre-determined alternate frequencies).

G9. **Establish communications** MCM 3-3,Vol VIII;TAC Pam 50-20)

a. Ensure air force frequencies in ATO are provided to army aviation.
b. Coordinate/ensure distribution of authentication tables.
c. Conduct full commo check on ground with AFAC/GFAC/TACP/AVN/FSO assets.
d. Consider using ETAC with portable UHF in heliocopter with AVN Air Battle Captain.

G10. **Coordinate Air Defense Artillery control procedures** (TAC Pam 50-20)

a. Identify Air Defense Artillery (ADA) activation procedures (FM early warning net to stinger teams).
b. Identify ADA change of status procedures.
c. Identify air ingress/egress routes.

d. Identify, and provide for, notification procedures for friendly air on station in the absence of a communications link between air controllers (TACP) and ADA sections.

e. Coordinate, and provide information on, aircraft types, flight schedules, and routes (20 minute warning).

G11. **Coordinate with Army Aviation** (TAC Pam 50-20; FM 1-111)

a. Identify responsibilities, aviation tasks and plans.

b. Identify constraints/limitations in altitude and routes.

c. Determine capabilities, type aircraft, callsigns, communications, and authenticators.

d. Identify engagement areas.

e. Identify critical locations, such as:

1) Landing zones.

2) Forward Arming and Refueling Points (FARP).

3) Battle Positions (BPs).

4) Aerial observation positions (AOPs).

f. Identify Joint Air Attack Team (JAAT) specific considerations.

g. Coordinate for a Helo-FAC, assistant ALO/ETAC in aircraft with AVN Air Battle Captain. (Bde and Bn TACP coordinate to provide for necessary personnel and joint use.).

G12. **Determine enemy ADA threat** (MCM 3-3, Vol VIII; TACP Pam 50-20)

a. Identify type and capabilities of enemy ADA systems (type munitions and anticipated targets).

b. Determine location of enemy ADA systems.

c. Determine past and expected activities (movement/remain stationary) of enemy ADA systems.

G13. **Review air capabilities and priorities** (TAC Pam 50-20; FM 6-20)

a. Brief ground commander on air capabilities and limitations.

b. Brief FSO on aircraft, weapons capabilities, limitations, controls, lead times, and request channels.

c. Confirm commander's intent and guidance on CAS.

d. Nominate appropriate targets for air munitions.

e. Air target selection priorities support both aircraft survival and the ground maneuver plan.

f. Target priorities conform with the ground fire support plan.

G14. **Analyze fire support plan** (MCM 3-3, Vol VIII; FM 6-20)

a. ALO is part of the fire support team.

b. ALO and FSO coordinate on aircraft availability, munitions, capabilities, and effects.

c. ALO recommends appropriate target sequence and CAS is included in the fire support execution matrix.

d. Primary concept for control measures in LIC is to separate artillery and CAS by time for the same target or by terrain feature for simultaneous delivery on different targets.

e. Fire support control measures are established.

1) Battle positions for army aviation.
2) No fire lines (NFL) and azimuth restrictions for artillery/mortars.
3) Engagement areas (EAs) identified by terrain features for CAS.
4) Other measures, such as FSCL, restrictive fire line (RFL), coordinated fire line (CFL), no-fire area (NFA), and restrictive fire area (RFA) established as appropriate.

f. Fire support system is prepared to shut down operations for critical CAS attacks.

g. The following information is identified:
1) Location of indirect fire assets.
a) Artillery guns.
b) Multiple Launched Rocket Systems.
c) Mortars.
2) Capabilities of indirect fire assets.
3) Missions, planned targets, and gun-target lines.
4) Sequence of engagement.
5) Maximum ballistic altitudes.
6) Movement sequence (timing and new locations).
7) ACAs.
8) JAAT considerations.

G15. **Plan JSEAD (Joint Suppression of Enemy Air Defenses)** (TAC Pam 50-20)
a. Identify enemy ADA systems known and probable locations.
b. Determine type of suppression desired.
c. Determine type of JSEAD available; air, artillery, army aviation, naval gunfire, EW, COLT laser team support, etc.
d. Integrate JSEAD with adjacent units.

G16. **Determine risk to Airborn Forward Air Controller** (MCM 3-3, Vol VIII)
a. Determine risk to Airborn Foward Air Controller (AFAC) during the following:
1) Target observation.
2) Target marking.
3) Holding pattern.
b. Identify AFAC position in relation to the enemy ADA threat.
1) Distance (range).
2) Systems capabilities.
c. Identify AFAC position in relation to friendly forces.
1) ADA.
2) Gun target lines.
3) Air routes.
d. Confirm appropriateness of the AFAC altitude and holding pattern area.

G17. **Analyze targets** (TAC PAM 50-20;FM 6-20)
a. Identify enemy locations.
b. Determine target type.
c. Determine the best method to defeat enemy targets.
1) Determine constraints imposed by munitions available and ROE.
2) Match munitions to type targets.
d. Identify appropriate JSEAD requirements.

e. Identify necessary suppression measures and appropriate suppression systems.
f. Determine the impact of weather on air operations.
g. Confirm engagement criteria.
h. Determine methods to identify friendly locations.
i. On receipt of ATO, ALO/FSO coordinate immediate 12 hour period and identify:
    1) Number and type of aircraft and munitions.
    2) Targets appropriate to aircraft and munitions.

G18. **Determine ground priority targets** (MCM 3-3, Vol VIII
a. S3/FSO establish target priorities.
b. ALO recommends priorities for air attack.
    1) Identify target type and munitions.
    2) Integrate target with threat to friendly forces, determining risk to air assets and risk of fratricide.

G19. **Identify Initial Point** (MCM 3-3, Vol VIII)
a. Identify location.
    1) Appropriate distance from threat.
    2) Easy to identify.
b. Determine holding altitude.
c. Confirm deconfliction of IP from gun target lines .
d. Confirm communication capabilities.

G20. **Analyze ground scheme of maneuver** (MCM 3-3, Vol VIII; TAC Pam 50-22)
a. Identify forward line of troops (FLOT) and/or battle positions (BPs).
b. Identify location of elements forward of the FLOT or operating independently (ie. scouts).
c. Identify methods of marking friendly troop locations (Glint tape, VS-17 panels, smoke, etc.)
d. Identify engagement areas (EAs) (designated areas with no friendly troops).
e. Identify maneuver restrictions, such as boundaries. axis of advance, and limitations.
f. Identify other control measures on troop movement or location, as required.
g. Determine how to ensure "eyes on target and friendlies" is accomplished (ie. ETAC forward with scouts, etc.).

G21. **Continuously Analyze Intelligence Developments** (TACM 3-1 VI)
a. Integrate strategic and higher echelon information and intelligence from all sources, such as:
    1) JSTAR.
    2) U2/TR1.
    3) Div/Corps G2.
b. Integrate information and intelligence from own unit's assets, such as:
    1) Reconnaissance elements/scout platoon.
    2) Ground assets/maneuver units.
    3) Ensure S2 receiving immediate tactical information observed by aircraft in the area.
    4) Other available assets.
c. Brigade TACP gathers information/intelligence and disseminates to other TACPs.

G22. **Initiate Close Air Support (CAS) request** (FM 90-21)

a. Request supports ground scheme of maneuver.
b. Request supports fire support plan.
c. Request conforms to intelligence estimate.
d. ALO identifies preplanned air requirements and prepares request for FSO/S3 Air to transmit.
e. If preplanned, request contains desired air control measures for inclusion in the ATO (ROZs, no fire areas, etc.).
f. If immediate CAS, S3/ALO ensures request contains information necessary to identify requestor; priority; target type, size, and location; time required and desired results.

G23. **Determine what air is planned** (MCM 3-3, Vol VIII)

a. TACP receives information on planned air sorties from the ATO.
b. Determine type of aircraft, capabilities and munitions.
c. Determine when the aircraft will arrive and how long aircraft will remain on station.
d. Determine Electronic Warfare (EW) capabilities.
e. Determine projected sortie allocation.

G24. **Determine what air is available** (MCM 3-3, Vol VIII)

a. Based on the ATO and communications with higher, the TACP identifies all aircraft available in the area during the needed timeframe .
b. Determine type aircraft, capabilities, and munitions.
c. Determine when and how long aircraft will be available.
d. Determine EW assets and capabilities.
e. Determine air priority of effort in the AO.
f. Determine projected tanker support.
g. Determine projected Airborn Warning and Control System (AWACS).
h. Determine projected fighter coverage.
i. Determine projected suppression coverage (JSEAD and Weasel).
j. TACP identifies aircraft on the way (2 hours out) and coordinates with S2/FSO on target types and locations, A/C and munitions, and enemy ADA.

G25. **Determine target identification procedures** (TAC Pam 50-28; FM 6-20)

a. Determine target marking procedures.
b. Determine the utility of using target marking methods, such as laser, smoke, tracers, or target description.
c. Identify easy to locate terrain features .
d. Ensure distinction between target marking and method for marking friendly locations is understood.

G26. **Develop contingency plans** (TACM 3-1 VI, FM 6-20)

a. Identify secondary targets for CAS.
    1) Identify alternate engagement areas.
    2) Prepare for second echelon engagement.
b. Identify back-up communications (ie. fire supportnet/radios, relay to AFAC on FM, etc.)

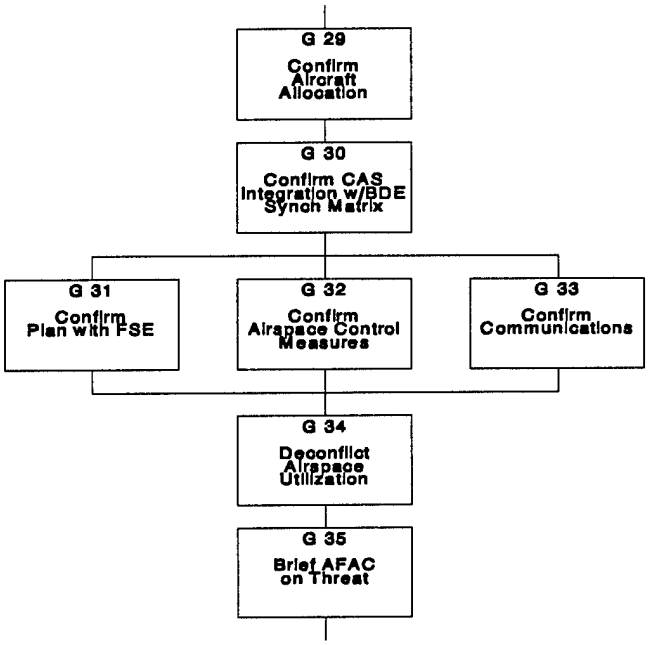
c. Coordinate for emergency control of CAS in event of ALO/ETAC KIA.
d. Determine FSO/FO ability to control CAS in emergency.

G27. **Organize for combat** (MCM 3-3, Vol VIII)
a. Establish chain of command.
b. Identify locations for TACP elements that provide for observation of target area.
1) AFAC.
2) GFAC.
3) Flight lead control.
c. Identify locations provide uninterrupted communication with air and ground forces.
d. Determine position of Air Liaision Officer within the command group for close coordination with the commander (in LIC, probably the TOC).
e. Identify CAS final control authority.

G28. **Designate subordinate responsibilities** (MCM 3-3, Vol VIII)
a. Confirm responsibilities for battalion TACPs.
b. Confirm required actions of the Brigade TACP.
c. Ensure any special instructions are disseminated to all subordinate elements.
d. Confirm that all subordinates are capable of fulfilling their assigned responsibilities.

TACP TASK SEQUENCE

PREPARATION



PREPARATION

G29. **Confirm aircraft allocation** (MCM 3-3, Vol VIII; TACM 55-46)

a. The following information is confirmed as early as possible:
   1) Type of aircraft.
   2) When the aircraft will arrive.
   3) Munitions.
   4) Number of sorties and station time.

G30. **Confirm CAS integration with Brigade Synch Matrix** (FM 6-20)

a. CAS plan conforms with Decision Support Template.
b. ALO and CAS are integrated into fire support rehearsals.
c. CAS is synchronized with scheme of maneuver.
   1) Timing.
   2) Command or event driven sequence.
d. CAS is incorporated into the fire support execution matrix and is synchronized with fire support plan.
   1) Timing.
   2) Command or event driven sequence.
   3) Targets.
e. CAS is synchronized with Army Aviation.
   1) Timing.
   2) Battle positions.
   3) Engagement areas.
f. Plan for continuous CAS missions.

G31. **Confirm plan with Fire Support Element** (FM 6-20)

a. Confirm that CAS plan is synchronized with indirect fire plan and included in the fire support execution matrix.
   1) Sequence of attack.
   2) Timing.
   3) Engagement areas.
   4) Targets.
b. Ensure that masking of indirect fires is minimized.
c. Review CAS target list for appropriateness.
d. Identify coordination considerations with Army Aviation.
e. ALO and CAS are integrated into fire support rehearsals.

G32. **Confirm airspace control measures** (MCM 3-3, Vol VIII; TACR 55-46)

a. Review airspace control order (ACO) and identify any changes to initial plan.
b. Identify local airspace restrictions for areas, altitude, times, and routes.
c. Specifically identify ROZs for army aviation operations (FARPs, BPs, etc.).
d. Monitor status of airfields and specifically identify ROZs for air routes, air drop, and field landing strip resupply operations.
e. Specifically identify no fire areas due to ROE or friendly ground force operations.
f. Confirm ADA restricted operations areas (ROAs), weapons free zones, and weapons control status.

G33. **Confirm communications** (MCM 3-3, Vol VIII; TAC Pam 50-20)

a. Confirm frequencies from ATO and distribution of frequencies to supported/supporting units.

b. Confirm distribution of proper authentication tables [AKAC 1553] to army units with need (army aviation, FSO, etc.)

c. Conduct communications check and confirm communications capability (to include authentication and HAVE-quick capability) with:

1) TACP elements.
2) Air forces.
3) Army aviation.
4) Ground forces.

G34. **Deconflict airspace** (TAC Pam 50-28; FM 100-103)

[Note: Units below brigade do not usually control enough airspace to perform this function.]

a. ACO provides for deconfliction of overall airspace into brigade AO.

b. Within brigade AO, brigade plan minimizes potential fratricide situations.

c. Brigade plan minimizes the masking of fires for all elements.

d. Plan provides for reaction to aircraft ingressing and egressing the AO.

e. Confirm that all the following assets are operating in concert:

1) CAS.
2) Helicopters (attack, lift, and scout).
3) Indirect fires (artillery, mortars, and naval gunfire.
4) ADA.
5) UAV.

f. FSO overlays indirect fire asset data (locations, gun target lines, maximum ordinate, etc.) on ACO measures to ensure deconfliction.

g. Monitor planned and outgoing fires.

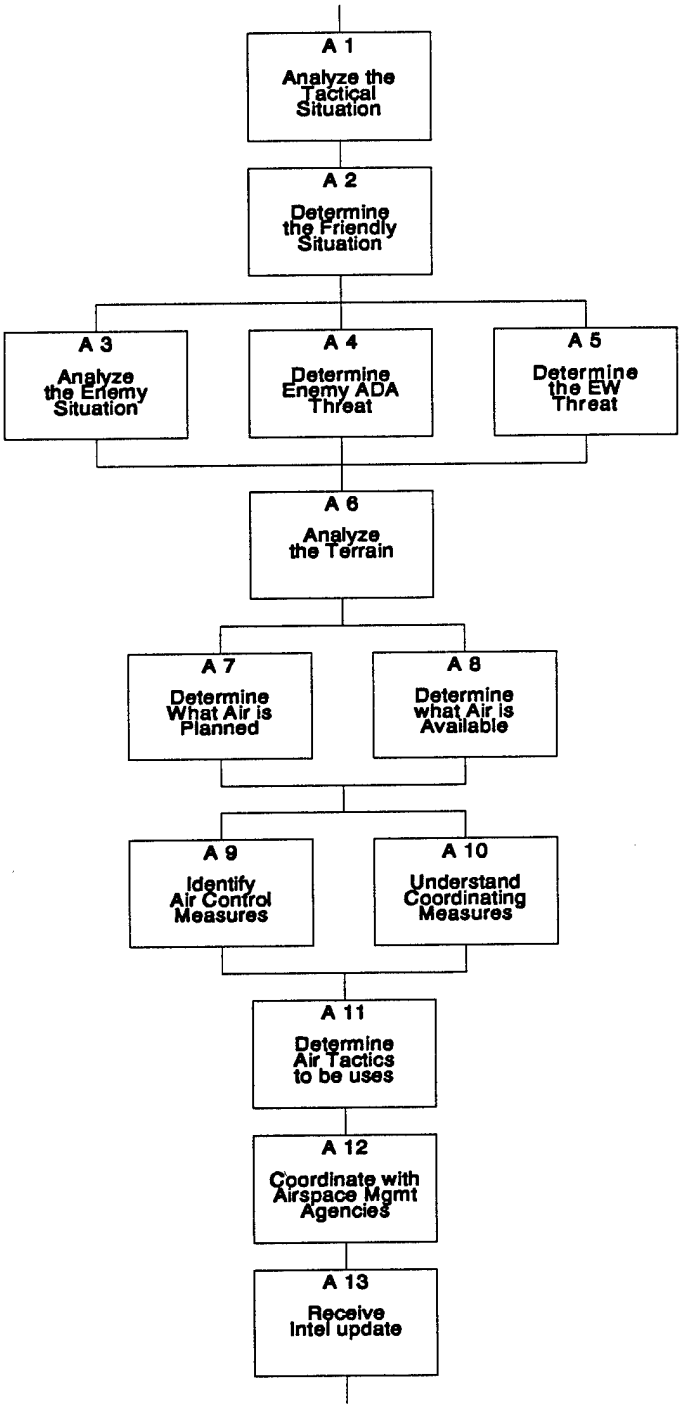
G35. **Brief AFAC on threat** (MCM 3-3, Vol VIII)

a. Size, disposition, locations and organization of enemy forces.

b. Current and anticipated enemy ADA capabilities, locations, and activities.

c. Current and forcasted weather.

AFAC TASK SEQUENCE PRE FLIGHT PLANNING



AFAC (AIR FORWARD AIR CONTROLLER)

PLAN
(Pre-flight)

A1. **Analyze the tactical situation** (MCM 3-3, Vol VIII)
- a. Determine ground forces mission, offensive and defensive.
- b. Determine purpose/intent of ground mission.
- c. Determine air forces mission.

A2. **Determine the friendly situation** (MCM 3-3, Vol VIII)
- a. The following information is identified:
  - 1) FLOT.
  - 2) Location of forward elements.
  - 3) Location of indirect fire assets.
  - 4) Helicopter AO.
  - 5) UAV AO.
  - 6) Location of FSCL (Fire Support Coordination Line).
  - 7) Location of other fire support coordinating or restrictive measures.

A3. **Analyze the enemy situation** (MCM 3-3, Vol VIII)
- a. Determine size, disposition, location, and organization of enemy forces.
- b. Identify potential courses of action.

A4. **Determine enemy ADA threat** (MCM 3-3, Vol VIII; TACP Pam 50-20)
- a. Identify type and capabilities of enemy ADA systems (type munitions and anticipated targets).
- b. Determine locations of enemy ADA systems.
- c. Determine past and expected activities (movement/remain stationary) of enemy ADA systems.

A5. **Determine the EW threat** (MCM 3-3, Vol VIII)
- a. Determine potential impact of friendly EW.
- b. Determine scope of enemy EW.
- c. Determine how to neutralize enemy EW.
- d. Identify measures to overcome enemy jamming.

A6. **Analyze the terrain** (MCM 3-3, Vol VIII)
- a. Determine ground avenues of approach, choke points, and obstacles.
- b. Identify air avenues of approach.
- c. Determine the impact of weather on air operations.
- d. Identify physical control features.
- e. Determine the impact of the sun angle on air operations.
- f. Determine the elevation of targets in feet.

A7. **Determine what air is planned** (MCM 3-3, Vol VIII)

a. AFAC receives information on planned air sorties from the ATO and communications with the TACP.
b. Determine type of aircraft, capabilities and munitions.
c. Determine when the aircraft will arrive and how long aircraft will remain on station.
d. Determine Electronic Warfare (EW) capabilities.
e. Determine projected sortie allocation.
f. Determine priority of effort.

A8. **Determine what air is available** (MCM 3-3, Vol VIII)

a. Based on the ATO, and communications with the TACP, AFAC identifies all aircraft available in the area during the needed timeframe .
b. Determine type aircraft, capabilities, and munitions.
c. Determine when aircraft will arrive and how long aircraft will remain on station.
d. Determine EW assets and capabilities.
e. Determine air priority of effort in the AO.
f. Determine projected tanker support.
g. Determine projected Airborn Warning and Control System (AWACS).
h. Determine projected fighter coverage.
i. Determine projected suppression coverage (JSEAD and Weasel).

A9. **Identify air control measures** (MCM 3-3, Vol VIII)

a. Confirm coordinating altitude (from AGL)
b. Confirm air ROE.
c. Determine restrictions and constraints (such as "no fly zones", civilian airline routes, etc.).
d. Identify the following areas:
    1) HIDACZ.
    2) ROZ.
    3) Air ingress/egress routes.
    4) ACAs.
    5) CPs/IPs.
    6) Helicopter air corridors.
    7) MRR.
    8) Engagement areas.

A10. **Understand coordinating measures** (MCM 3-3, Vol VIII)

a. Confirm refueling capability.
b. Identify the location of holding areas.
c. Determine available on station time.
d. Confirm engagement constraints.

A11. **Determine air tactics to be used** (MCM 3-3, Vol VIII)

a. Tactics are appropriate to threat.
    1) High threat-low altitude.
    2) Low threat-high altitude.
b. Tactics are appropriate to mission.
c. Tactics are appropriate to terrain and weather.

A12. **Coordinate with airspace management agencies** (MCM 3-3, Vol VIII; TACM 3-1 V8)

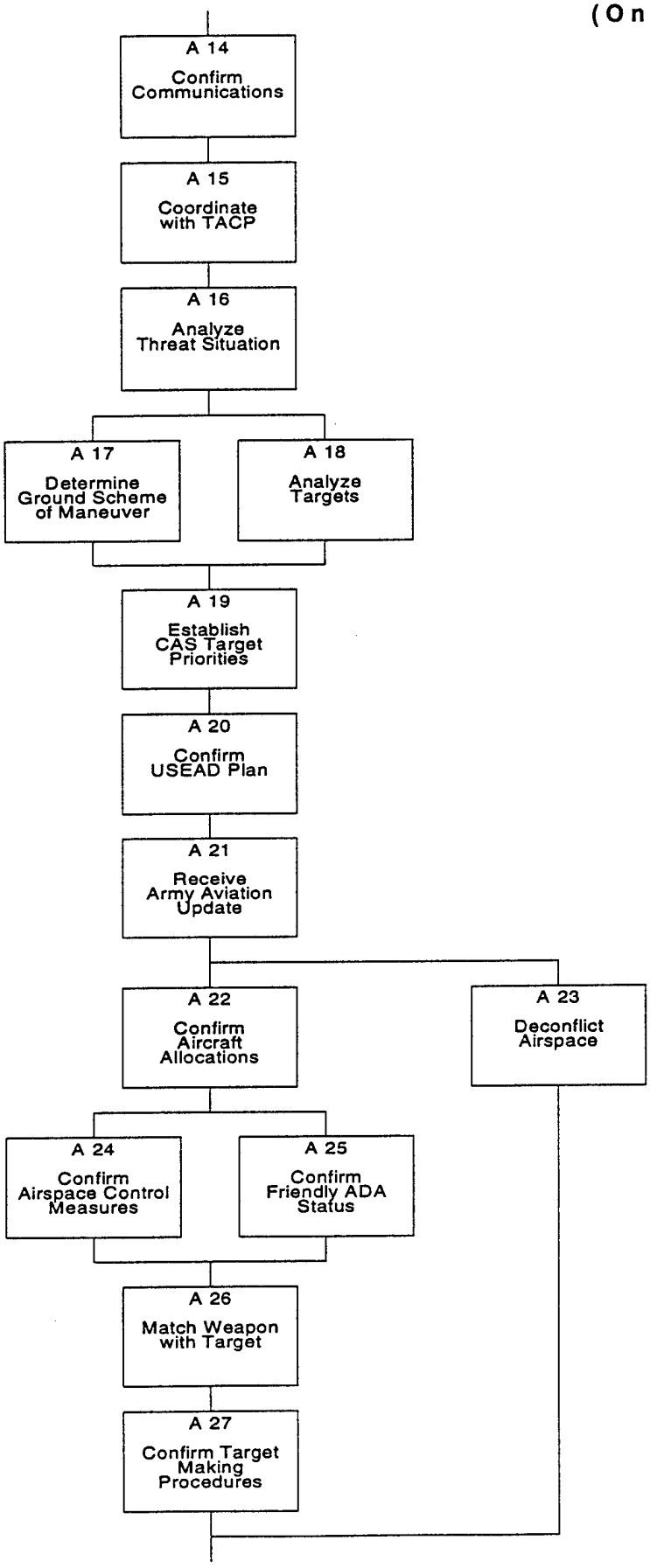
a. Confirm assigned area of operations.
b. Determine EW situation.
c. Confirm radar monitoring capability.
d. Confirm enemy and friendly ADA situation.
e. Determine echelon specific restrictions.
f. Coordinate with Air Support Operations Center (or Airborn Battlefield Command and Control Center as alternate).

A13. **Receive Intelligence update** (TACM 3-1 V8)

a. Update given prior to arrival in area of operations.
b. Update includes latest information on area of operations.

AFAC TASK SEQUENCE

PREPARATION (On Station)



PREPARE
(On Station)

A14. **Confirm communications** (MCM 3-3, Vol VIII)
- a. Communications are established with the TACP, air forces (aircraft), Army aviation, and ground forces, as required.
- b. UHF, VHF, FM, HAVE-Quick capability, and authentication are confirmed, as appropriate.

A15. **Coordinate with TACP** (TAC Pam 50-22; TAC Pam 50-20)
- a. Recieve update from TACP.
  - 1) Latest CAS information.
  - 2) Latest tactical intelligence.
  - 3) Ground tactical situation.
  - 4) Location of TACP.
  - 5) Confirm friendly ADA status.
  - 6) Update on current enemy ADA threat.
- b. Update TACP on air observations.

A16. **Analyze Threat Situation** (MCM 3-3, Vol VIII)
- a. Determine the best method to defeat targets (usually pilot option).
- b. Determine the impact of weather on air operations.
- c. Determine methods to suppress enemy ADA.

A17. **Determine ground scheme of maneuver** (TAC Pam 50-22)
- a. TACP talks AFAC through ground reference points to identify controls, areas, and targets.
- b. Identify FLOT and /or BPs.
- c. Identify engagement areas.
- d. Identify maneuver restrictions, such as axis of advance, boundaries, and other limitations.
- e. Identify location of elements forward of the FLOT or operating independently (ie. scouts).
- f. Identify methods for marking friendly troop locations.

A18. **Analyze targets** (MCM 3-3, Vol VIII)
- a. Identify location.
- b. Determine target type.
- c. Confirm engagement criteria.
- d. Identify final control authority for each target.
- e. Determine target elevation (in feet).

A19. **Establish CAS target priorities** (FM 6-20)
[Note: Ground force commander establishes CAS target priorities. ABCCC diverts A/C to priority targets based on the commander's guidance.]

a. Target selection priorities support both the ground maneuver plan and aircraft survival.
b. Target priorities conform with the ground fire support plan.

A20. **Confirm JSEAD plan** (MCM 3-3, Vol VIII)
a. Verify JSEAD requirements.
b. Verify planned suppression measures.

A21. **Receive Army Aviation update** (TAC Pam 50-22)
a. Identify responsibilities (aviation tasks and plans).
b. Identify constraints/limitations in altitude and routes.
c. Confirm capabilities (aircraft, communications, authentication, etc.).
d. Confirm engagement areas.
e. Identify critical locations, such as:
1) Landing zones.
2) FARPs.
3) Battle positions (BPs).
4) Aerial Observation Positions (AOPs).
f. Determine method of authentication between helicopters and CAS.

A22. **Confirm aircraft allocation** (MCM 3-3, Vol VIII;TACM 55-46)
a. The following information is confirmed as early as possible:
1) Type of aircraft.
2) When the aircraft will arrive.
3) Munitions.
4) Number of sorties and station time.

A23. **Deconflict airspace** (TAC Pam 50-28;FM 100-103)
[Note: Units below brigade level do not usually control enough airspace to perform this function.]
a. ACO provides for deconfliction of overall airspace into the brigade area.
b. Within the brigade AO, brigade plan minimizes potential fratricide situations.
c. Plan minimizes the masking of fires for all elements.
d. Plan provides for reaction to aircraft ingressing and egressing the AO.
e. Confirm that all the following assets are operating in concert:
1) CAS.
2) Helicopters (attack, lift, and scout)
3) Indirect fires (artillery, mortars, and naval.
4) ADA.
5) UAV.

A24. **Confirm airspace control measures** (MCM 3-3, Vol VIII; TACR 55-46)
[Note: AFAC and aircraft check in with the Control Radar Center (CRC) for update on control measures when they enter the controlled airspace. AFAC controls all air in his designated area.]
a. Review airspace control order (ACO) and identify any changes to initial plan.
b. Identify local airspace restrictions for areas, altitude, times, and routes.
c. Specifically identify ROZs for army aviation operations (FARPs, BPs, etc.).

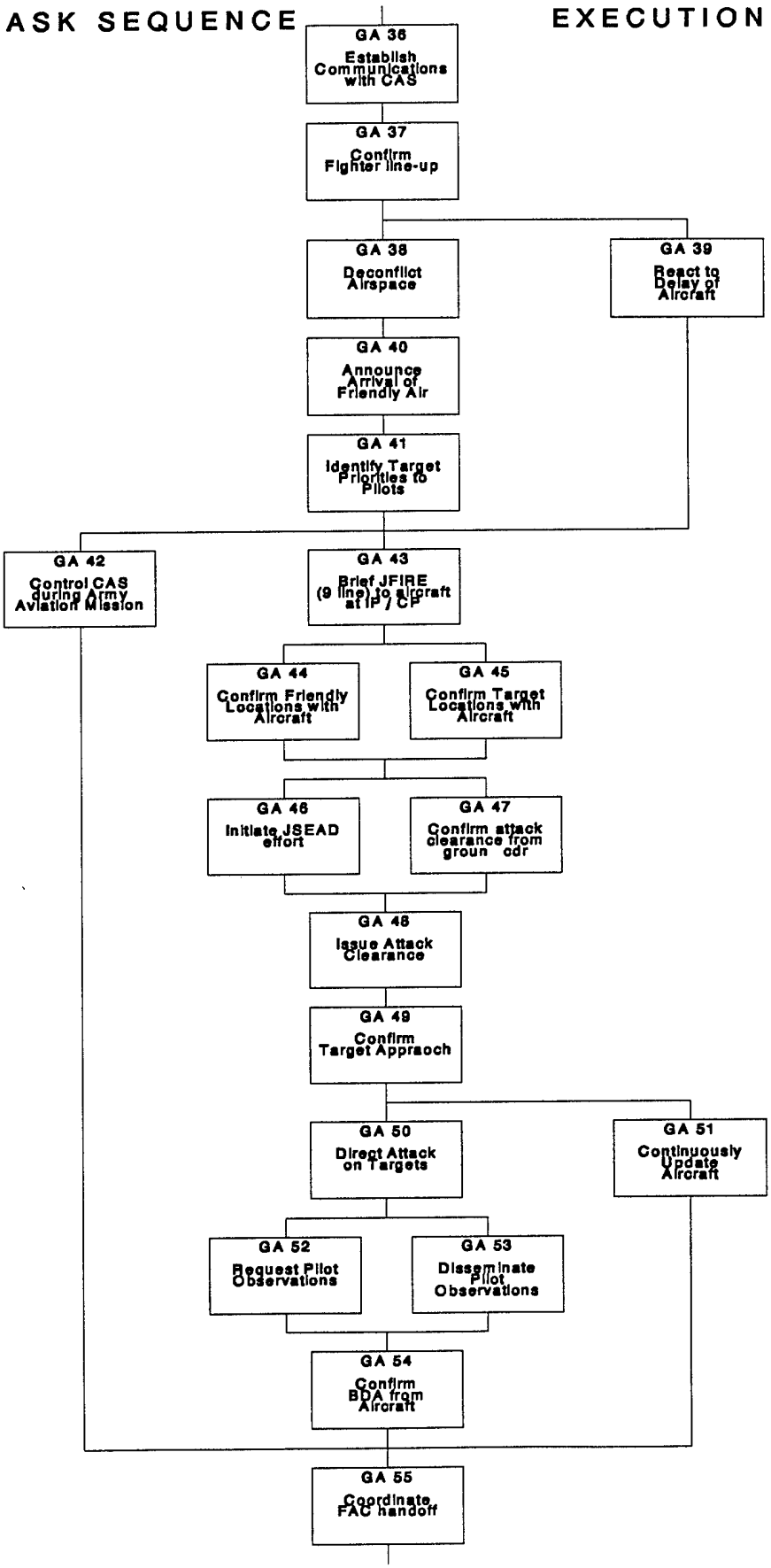
d. Monitor status of airfields and specifically identify ROZs for air routes, air drop, and field landing strip resupply operations.
e. Specifically identify no fire areas due to ROE or friendly ground force operations.
f. Confirm ADA restricted operations areas (ROAs), weapons free zones, and weapons control status.

A25. **Confirm friendly ADA status** (MCM 3-3, Vol VIII;FM 100-103)
a. Verify current ADA status .
b. Verify procedures to change ADA status.

A26. **Match weapon with target** (MCM 3-3, Vol VIII)
a. Ensure that planned targets are matched with the most appropriate weapon system.
b. Confirm that munitions support scheme of maneuver.
c. Sequence attack to conform to established target priorities.
d. Sequence attack to conform to fire support plan.

A27. **Confirm target marking procedures** (TAC Pam 50-28)
a. Verify marking procedures and ensure understanding of distinction between target marking and method of marking friendly locations.
b. Confirm the utility of using target marking methods such as laser, smoke, tracers, or target description.
c. Verify terrain features for ease of identification.

AIR/GROUND TASK SEQUENCE — EXECUTION



CLOSE AIR SUPPORT TASK LIST
EXECUTION
(Cyclic)

GA36. **Establish communications with CAS** (TAC Pam 50-28;TAC Pam 50-20)

a. Confirm/establish communications with incoming CAS (fighters).
   1) Conduct authentication.
   2) Activate Chattermach (alternate frequency) plan.

b. Continuous communications are maintained between the following:
   1) CAS and FAC.
   2) FAC and TACP.
   3) TACP and command group.

c. Army Aviation maintains communication with the following:
   1) Command group.
   2) TACP.
   3) FAC (if JAAT).

GA37. **Confirm Fighter line-up** (TAC Pam 50-22)

a. Call sign.
b. Mission number.
c. Ordnance and fusing.
d. On station time (playtime).
e. Abort code.

GA38. **Deconflict airspace** (TAC Pam 50-28)

a. Shift or lift indirect fires.
b. Shift other air assets, such as helicopters or UAVs.
c. Update ADA status.
d. Establish CAS holding points.
e. Prepare to stack fighters.
f. Avoid air drop/air land ROZs.

GA39. **React to delay of aircraft** (TAC Pam 50-28)

a. Confirm new time.
b. Determine changes in ground situation.
c. Confirm targets.
d. Develop new targets.
e. Activate contingency plans.

GA40. **Announce arrival of friendly air** (MCM 3-3, Vol VIII)

a. AFAC Notify TACP.
b. TACP notify command group.

GA41. **Identify target priorities to pilots** (TAC Pam 50-22)

a. Ensure that pilots understand target priorities.

b. Ensure that pilots understand CAS attack sequence.

GA42. **Control CAS during Army Aviation mission** (TAC Pam 50-20)

a. Confirm call signs for all aircraft.

b. Confirm JFIRE/JAAT targets.

c. Confirm target locations for:

1) CAS.

2) Army Aviation.

3) Indirect fires.

d. Confirm target marking procedures.

e. Confirm friendly location marking procedures.

GA43. **Brief JFIRE (9 Line) to aircraft at IP/CP** (MCM 3-3, Vol VIII)

a. Briefing follows prescribed format.

b. CAS aircraft have current information on the following:

1) Targets

2) Friendly situation

3) Hazards (ADA, enemy, indirect fires, etc.).

GA44. **Confirm friendly locations with aircraft** (TAC Pam 50-22;MCM 3-3,Vol VIII)

[Note: Commander/S3/FSO must continually track locations of all subordinate elements. Battle tracking of most forward elements is critical to accurate and rapid employment of CAS and avoidance of fratricides.]

a. TACP coordinates with S3/FSO on last known friendly locations and friendly position marking methods.

b. TACP transmits information to AFAC, who forwards to attack aircraft.

c. Pilots can identify FLOT.

d. Pilots can identify location of elements forward of the FLOT.

e. Pilots are aware of other aircraft in the area.

f. Pilots understand the danger close (1000 meters) criteria.

GA45. **Confirm target locations with aircraft** (TAC Pam 50-22;MCM 3-3, Vol VIII)

a. Ensure that CAS aircraft can identify the targets.

b. Designate targets:

1) By grid.

2) From known terrain feature.

3) By marking designator.

GA46. **Initiate JSEAD effort** (MCM 3-3, Vol VIII)

a. Execute prior to CAS attack.
b. Confirm targets.
c. Confirm method of attack.
    1) CAS.
    2) Army Aviation.
    3) Indirect fires (Artillery, Naval gunfire).
    4) Electronic warfare.
d. Confirm effectiveness of attack.

GA47. **Confirm attack approval from ground commander** (TAC Pam 50-28)

a. Ensure ground commander is aware of the target type and location.
b. Ensure ground commander is aware of the time of attack and munitions to be used.
c. Ensure ground commander is aware of closest friendly unit to the attack and the risk involved.

GA48. **Issue attack clearance** (MCM 3-3, Vol VIII)

a. Identify final authority.
b. Confirm abort code.
c. Confirm type of clearance.
    1) Depart IP.
    2) On Final.
    3) Flight Lead Control.

GA49. **Confirm target approach** (MCM 3-3, Vol VIII)

a. Ensure that the ground forces confirm the air corridor, attack altitude, and attack timing.
b. Ensure that the air forces confirm the air corridor, attack altitude, and attack timing.

GA50. **Direct attack on targets** (TAC Pam 50-28)

a. Execute JSEAD.
b. Direct CAS to targets.
c. Identify targets for aircraft using smoke, laser, geographic references, etc.

GA51. **Continuously update aircraft** (TAC Pam 50-28;TAC Pam 50-20)

a. Anticipate ground maneuver speed.
b. Continuously give aircraft known and probable locations of enemy forces.
c. Continuously give aircraft locations of friendly forces.
d. Continuously update aircraft on the ground tactical situation.

GA52. **Request pilot observations** (MCM 3-3, Vol VIII)

a. Determine size of enemy forces.
b. Determine enemy diposition.
c. Determine type of enemy force.
d. Identify movement.

GA53. **Disseminate pilot observations** (MCM 3-3, Vol VIII)

a. TACP receives pilot tactical observations.
b. TACP ensures all pilot tactical observations are immediately passed to the S2, S3, Commander, and other aircraft.

GA54. **Determine Battle Damage Assessment** (TAC Pam 50-22;MCM 3-3, Vol VIII)

a. Identify friendly aircraft losses.
b. Identify enemy personnel and equpment losses by type, estimated quantity, and location.

GA55. **Execute FAC handoff** (TAC Pam 50-28;TAC Pam 50-22;MCM 3-3, Vol VIII)

a. Designate FAC responsibilities (in cases of multiple FACs).
b. Update incoming FAC on situation.
c. Ensure continuous and unimpeded CAS support.
d. GFAC prepared to assume direct control of aircraft.