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BATTLEFIELD COORDINATION DETACHMENT (BCD)

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PREFACE

Efficient planning, coordination, and execution of air support to United States (US) Army forces (ARFOR) ground operations is essential to overall success of the ARFOR mission. This manual describes the role of the battlefield coordination detachment (BCD) as the ARFOR commander's vital link between ARFOR ground operations and the joint force air component commander's (JFACC) air operations. The BCD facilitates the synchronization of air and ground operations in the following areas:

- Air interdiction (AI).
- Air reconnaissance.
- Close air support (CAS).
- Electronic warfare (EW).
- Theater airlift.
- Reconnaissance, intelligence, surveillance and target acquisition (RISTA).
- Army airspace command and control (A^2C^2).
- Air and missile defense.

The concept for this organization originated in 1980. It was required in Europe to deal with the capability of Soviet Union at that time to attack in successive echelons, overwhelming the ground defense. The US doctrine of deep operations was aimed at attacking the Soviet array in depth to disrupt their synchronization and, therefore, diminish their effectiveness. The success of US deep operations required close and continuous coordination between the air component commander (ACC) and the land component commander (LCC). The result of this deep operations doctrine was creation of the battlefield coordination element (BCE). The BCE was an Army liaison team that operated in the United States Air Force (USAF) tactical air control center (TACC) for continuous coordination and exchange of information. The TACC is now called the air operations center (AOC). The BCE name was changed to battlefield coordination detachment (BCD) with the writing of this' manual to conform to Army force structure designations.

The Memorandum ofAgreement Between the United States Air Force and the United States Army for Army/Air Force Liaison Support, dated 1 Nov 95, states:

The U.S. Army will field a robust battlefield coordination element (BCE) (or theater equivalent) to USAF air operations centers (or theater equivalent). The BCE will effectively integrate US Army operational requirements into the air tasking order (ATO) development process. BCEs should participate as often as possible in exercises with appropriate USAF organizations to maintain combat mission readiness.

Note: As stated the BCE is now replaced by the BCD.

This manual describes the mission, role, organization, and operations of the BCD. Also provided are:

- Considerations for training and material required to perform the BCD mission and functions.

- Descriptions of BCD personnel and equipment requirements.
- Considerations for augmentation in contingency operations.

Army forces must be able to provide liaison to any commander tasked as the ACC in joint operations. This manual addresses considerations for adapting the BCD to various service requirements for interoperability.

Field manual (FM) 100-13 is fully compatible with the operations doctrine of the Army as contained in FM 100-5 and is consistent with joint and combined doctrine. It assumes the user has a fundamental understanding of the following FMs:

- FM 100-5, *Operations.*
- FM 100-7, *Decisive Force: The Army in Theater Operations.*
- FM 101-5, *Command and Staff.*
- FM 101-5-1, *US Army Operational Terms and Graphics.*

This manual amplifies Army doctrine for the BCD provided in these manuals.

This manual does not provide specific detailed functional techniques and procedures which are more appropriately addressed in US Army branch publications. For example:

- Intelligence.
- Fire support.
- Air defense.
- Airspace management.
- Airlift.
- Joint tactics, techniques and procedures (JTTP).
- Unit standing operating procedures (SOPS).

Joint publications (JPs) which impact this field manual and take precedence include the following:

- 3-52, *Doctrine for Joint Airspace Control in the Combat Zone.*
- 3-56, *Tactical Command and Control Planning Guidance and Procedures for Joint Operations.*
- 3-56.1, *Command and Control for Joint Operations.*

In addition, theater commanders-in-chief (CINCs) may publish concepts of operations (CONOPS) or other directives which clarify how joint and service doctrine will be applied in their theaters with regard to the command and control of all joint operations.

The proponent of this publication is the US Army Field Artillery School (USAFAS). Submit changes for improving this publication on Department of the Army (DA) Form 2028 *Recommended Changes to Publications and Blank Forms* and forward it to:

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Fort Sill, Ok 73503-5600

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1
THE BCD MISSION AND ROLE IN OPERATIONS

The current BCD configuration supports the battlefield functions of the ARFOR commander. The definition of the BCD in Joint Pub 1-02 recognizes that the ARFOR BCD may establish liaison with the AOC of any service component.

> *(The BCD is) an Army liaison provided by the Army component commander to the air operations center (AOC) and/or to the component designated by the joint force commander to plan, coordinate, and deconflict air operations. The (BCD) processes Army requests for tactical air support, monitors and interprets the land battle situation for the JAOC*, and provides the necessary interface for exchange of current intelligence and operational data.* (JP 1-02)

*joint air operations center

Section 1. MISSION AND ROLE OF THE BCD

BCD Mission

Close coordination between the Army force commander (COMARFOR) and the JFACC is required to achieve the Army functional responsibility of synchronizing maneuver, fires, and interdiction in the ARFOR area of operations (AO). The BCD mission is to establish the ARFOR liaison and interface with the JFACC. The BCD eases the coordination and synchronization of JFACC air and ARFOR ground operations. The BCD mission is performed by accomplishing the following:

- Exchanging operational and intelligence data between the JFACC and COMARFOR.
- BCD interpretation of the land battle situation for the JFACC and the air operations situation for the COMARFOR.

The BCD operates on a 24-hour a day basis.

BCD Basis of Allocation

The BCD basis of allocation is one per Army service component commander (ASCC) based on requirements approved by DA. The BCD may support the ASCC or be tailored to support a corps or division commander's operations. Normally, the BCD is assigned to the ASCC and further attached to the senior operational ARFOR headquarters.

The controlling headquarters instructs the BCD to collocate with the JFACC'S operations center, called the joint air operations center (JAOC). The JAOC will be hosted by one of the following:

- AOC when the JFACC is provided by the USAF.
- Tactical air control center (United States Navy [USN] TACC) when the JFACC is provided by the USN
- Tactical air command center (Marine TACC) when the JFACC is provided by the Marine Corps.

BCD Role In Support of Corps Operations

A single ASCC or ARFOR may be composed of several corps. It is possible for the controlling ARFOR to be designated as the joint force land component commander (JFLCC), or as the joint force commander (JFC). In either case, the BCD singly represents the ARFOR interests of the JFLCC. Other services or functional components normally provide their own liaisons to the JFACC and to the JFLCC as appropriate. For example, all of the following might provide liaison:

- Special operations liaison element (SOLE).
- Marine liaison officer (MARLO).
- USN air and/or Naval liaison element (NALE).

In a multicorps environment, each corps normally provides liaison to the echelon above corps (EAC) headquarters. This liaison speeds the flow of information received from the BCD and is of interest to the corps staff. In a single corps operation in which the corps commander is the COMARFOR, the BCD supports the corps headquarters and collocates with the JAOC. In the event a corps or subordinate organization conducts concurrent contingency operations, the ASCC tailors the BCD to support the requirements of the deployed headquarters.

Section II. BCD FUNCTIONS

General

As the ARFOR commander's representative in the JAOC, the BCD ensures the JFACC is aware of the following:

- The COMARFOR's intent.
- Scheme of maneuver.
- Concept for application of ground, naval, and air assets in the ARFOR AO.

The BCD monitors and interprets the land battle for the JFACC staff. It passes ARFOR operational data and operational support requirements from the COMARFOR to the JFACC and participating multinational forces to include the following:

- CAS.
- AI.
- Manned and unmanned reconnaissance and surveillance.
- Joint suppression of enemy air defense (JSEAD).

The BCD also communicates the COMARFOR's decisions and interests to the JFACC.

The BCD does not participate directly in the ARFOR command estimate or decision-making process. The BCD does supply information regarding all the battlefield operating systems and functions to ARFOR staff elements during the process. The COMARFOR may delegate decision-making authority for specific events or situations to the BCD commander. This authority speeds action on various functions supporting the commander's plan and must be clearly defined by the COMARFOR. The BCD eases planning, coordination, and execution of the following functions:

- Battle command.
- Intelligence.
- Firepower means.
- Airspace management.
- Air defense.
- Theater missile defense (TMD).
- Command and control warfare (C^2W).
- Airlift support.

Battle Command

Battle command is the art of decision making, leadership, and of motivating soldiers and their organizations to accomplish the mission. It includes visualizing and formulating concepts of operations to get from the current to the desired situation at the least cost. Battle command also includes the following:

- Assigning missions.
- Prioritizing and allocating resources.
- Selecting the critical time and place to act.
- Knowing how and when to make adjustments during the fight.

The primary role of the BCD is to support the COMARFOR's ability to conduct battle command. The personnel in the BCD must understand what

information the commander deems important in making decisions and get it to him in a timely fashion. The BCD supports battle command by providing timely and accurate input to the COMARFOR decision-making process and by assisting the COMARFOR staff during execution. Commanders must understand the battle from the perspective of both the supported and supporting commanders. This thorough understanding of intent promotes unity of effort.

Communication is the bridge that links information to decisions and decisions to actions. The BCD is in a unique position to support the COMARFOR's communication needs by locating in close proximity to liaison teams of all the separate component commanders.

Intelligence

The exchange of intelligence among components is key to both current and future operations. The fusion center for component-level intelligence is the joint intelligence center (JIC). Most intelligence is available to the JFACC through the JIC. The joint and component collection management staffs give routine intelligence reports directly to the JAOC.

The BCD articulates the COMARFOR's commander's critical information requirements (CCIR) and priority intelligence requirements (PIR) to the JFACC. The BCD identifies and speeds current CCIR and PIR intelligence from JFACC intelligence sources to the COMARFOR intelligence staff. The BCD communicates intelligence and information derived from the CCIR and PIR to the COMARFOR analysis and control element (ACE). The BCD provides to the JFACC intelligence staff the following:

- Information on the enemy order of battle.
- Time sensitive Army intelligence reports.
- Requirements for manned and unmanned reconnaissance, surveillance, and collection.

The BCD assists the JFACC staff in target development and integration of COMARFOR target nominations into the ATO. The BCD gets the most current information from ARFOR intelligence to help refine and validate targets for attack during execution of the ATO.

The BCD also exchanges information to support combat assessment. The BCD intelligence function supports ARFOR needs to do the following:

- Assess the effectiveness of current operations.
- Modify current plans.
- Plan future operations.

Firepower Means

The BCD presents the ARFOR commander's targeting requirements for preplanned CAS and AI to the JFACC. The BCD also passes JFACC requests for all ARFOR supporting fires to the ARFOR tactical operations center (TOC) or firing unit as directed in the ARFOR fire support plan. The BCD ensures that the JFACC staff is aware of current and planned ARFOR fire support operations, including confirmation of associated coordination and control measures.

The BCD eases synchronization of the JFACC's AI operation with ARFOR deep operations plans. The JFACC and COMARFOR discuss requirements for AI support to ARFOR operations typically during the joint targeting coordination board (JTCB) meeting. After the discussion, the BCD helps the JFACC staff identify targets when the COMARFOR gives "mission type" objectives for AI.

The BCD monitors execution of the ATO and passes information about the current air situation to the COMARFOR. The BCD passes information through the COMARFOR staff to commanders affected by JFACC attack of targets beyond the fire support coordination line (FSCL). This lets air and ground forces take positive actions to avoid fratricide and duplication of effort.

The BCD works closely with the JAOC to synchronize

AI missions with Army deep strike assets on the most lucrative targets. The BCD performs supporting tasks assigned by the COMARFOR to plan, coordinate, and execute lethal and nonlethal joint firepower.

The JFC may direct the integration of planned ARFOR airspace operations into the ATO. The BCD eases the integration of the systems into the ATO and helps track execution of their missions.

Airspace Management

The BCD coordinates ARFOR airspace management needs with the JAOC. These needs reflect requirements for use of airspace throughout the ARFOR AO by the following:

- ARFOR fixed- and rotary- winged aircraft.
- Reconnaissance and surveillance platforms such as unmanned aerial vehicles (UAV).
- Indirect fire trajectories.

The BCD coordinates ARFOR requests for airspace control measures (ACM) with the airspace control authority (ACA). When the JFC designates the JFACC as ACA, the coordination occurs at the JAOC. When the JFACC is not the ACA, the ARFOR commander must provide other liaison and communications means to the designated ACA.

The BCD passes information to the ARFOR regarding JFACC air operations within the ARFOR AO. On the basis of information from the SOLE, the BCD monitors the location of special operations forces (SOF). The monitoring includes long-range surveillance units (LRSUs), operating in the ARFOR AO to help reduce fratricide and/or interference with their special operations missions.

The BCD also coordinates the use of airspace by ground-based fire support systems, especially rockets and missiles, with other airspace users. The COMARFOR is responsible for establishing ACM and fire support coordination measures (FSCM) to both facilitate fires and protect other airspace users. The BCD coordinates these measures with the JFACC staff to ensure they are included in the airspace control order (ACO).

Air Defense

The area air defense commander (AADC) is normally the component commander with the best air defense capability and the command, control, communications, and intelligence (C^3I) capability for planning and executing integrated air defense operations. The JFACC may be designated the joint force area air defense commander (AADC). The BCD eases coordination between ARFOR air and missile defense operations and the JFACC staff when the JFACC is also the AADC. The BCD helps the JFACC staff integrate JFACC defensive counterair operations with ground air defense systems. This BCD function is key to effective air defense and to precluding fratricide.

Theater Missile Defense

The term "theater missile defense" applies to the identification, integration, and employment offorces supported by other theater and national capabilities, to detect, identify, locate, track minimize the effects of, and/or destroy emeny theater missiles (TM). This includes the destruction of TM on the ground and in flight, their ground based launchers and supporting infrastructure; TM capable ships and vessels in port or at sea; and enemy aircraft armed with air to surface missiles. TMD operations are accomplished by integrating a mix of mutually supporting passive defense, active defense, and C^4I measures. (JP 3-01.5)*

*C^4I=command, control, communications, computers, and intelligence

TMD is a joint mission, integrated into and in support of the JFC's overall concept of operation and campaign objectives. The JFC establishes guidance and objectives for joint-TMD (JTMD).

The ARFOR TOC theater missile defense cell, if formed, plans and coordinates TMD operations for the ARFOR. The TMD cell gives direct early warning to ARFOR air defense units as appropriate. The COMARFOR specifies the role of the BCD to help in coordination of TMD active defense and attack operations with the JAOC.

The BCD may be the first ARFOR agency aware of the presence of a TMD target through sources at the JAOC. In this case, the BCD helps coordinate the rapid attack of TMD targets by the most efficient means available. With regard to TMD the BCD does the following:

- Speeds target confirmation.
- Deconflicts airspace.
- Provides early warning to friendly air defense artillery (ADA) headquarters.
- Directs Army tactical missile system (ATACMS) and multiple launch rocket system (MLRS) missions against TMD targets (when authorized).

Command and Control Warfare

Command and control warfare is a two pronged effort. The first is to deny information to, influence, degrade or destroy adversary command and control (C^2) capabilities by the integrated use of the following:

- Operations security (OPSEC).
- Military deception.
- Psychological operations (PSYOPS).
- EW.
- Physical destruction.
- Intelligence.

The second element of C^2W is to protect friendly C^2 capabilities against such actions. C* W applies across the full range of military operations and all levels of war. C^2W includes C^2 attack of adversary and C^2 protection of friendly force C* capabilities.

The BCD helps the ARFOR coordinate and synchronize actions taken to accomplish established objectives that prevent the effective C^2 of adversary forces. These actions include denying information to and influencing, degrading or destroying the adversary C* system. In addition, the BCD helps the ARFOR coordinate and synchronize actions taken and support requested from the JFACC to maintain effective C^2 of friendly forces.

The ARFOR TOC C^2W cell identifies specific C^2W supporting requirements for action by various agencies, including the JFACC. The BCD coordinates ARFOR C^2W support requests with the JFACC.

Airlift Support

The BCD coordinates COMARFOR requests through the JFACC airlift coordination cell (ALCC) with the joint movements center (JMC). The JMC "works" the requirements with the J4 and approves or disapproves airlift requests on the basis of priorities and available airlift. The BCD also informs the JFACC staff of the enemy and friendly situations' impact on COMARFOR airlift requirements. The BCD helps predict future airlift requirements based on COMARFOR plans.

Section III. THE BCD RELATION TO OTHER SERVICES

General

The BCD represents COMARFOR interests to the JFACC. Contingency operations and time-phased force deployment require the BCD to work in the structure of any component designated the JFACC. A BCD working with a JAOC established by one service may also work with liaison personnel from other services and multinational forces provided to the

JAOC. For example the JAOC might have assigned the following:

- MARLO.
- Naval liaison element (NALE).
- SOLE.
- Host nation and coalition forces liaison elements.

The BCD personnel must be trained and knowledgeable of other Services' organizations, capabilities, and procedures. This BCD capability helps the COMARFOR benefit from the complementary capabilities each of the services brings to a joint operation.

USAF Force

USAF forces (AFFOR) perform the following four basic roles:

- Aerospace control.
- Force application.
- Force enhancement.
- Force support.

To accomplish these roles, the USAF performs specific tasks or missions to include the following:

- Counterair.
- Surveillance and reconnaissance.
- Counterspace.
- TMD operations.
- AI.
- CAS.
- Special operations.
- Airlift.

Additional missions performed by the USAF which may enhance ARFOR operations include the following:

- Aerial refueling.
- EW.
- Airborne early warning.
- C^2.
- Communications.
- Intelligence.
- Weather service.

For more information regarding the organization and functions of the USAF as the JFACC, see Appendix A, BCD relation to the USAF.

USN

USN forces (NAVFOR) roles and missions which most directly affect ARFOR operations include providing the following:

- Naval forces (including air) to conduct amphibious operations.
- Sea-based air and missile defense.
- Naval surface fires, AI, and CAS, to support land operations.
- Sea movement of personnel, supplies, and equipment.

The USN performs other tasks and possesses other capabilities which may enhance ARFOR operations including the following:

- C^2 facilities afloat.
- Intelligence.
- Information warfare.
- EW.
- Naval surface fire support.
- Air reconnaissance.
- Aerial photography.
- Airborne early warning.
- Air transport.
- Offensive and defensive air operations other than CAS.

The JFC may apportion naval aviation capabilities and/or forces to various missions or areas to support the JFC overall mission. These sorties are normally planned, coordinated, and tasked through the JFACC. For more information on the USN as JFACC, see Appendix B, BCD Relation to the NAVFOR and MARFOR.

Marine Corps

United States Marine Corps (USMC) forces (MARFOR) contribute to ARFOR operations through the conduct of land operations and land operations key to a naval operation. USMC tactical air support in an assigned or designated AO or sector includes the following:

- Offensive air support (CAS and deep air support),
- Air warfare (AW).
- TMD.
- EW.
- Assault support.
- Air reconnaissance.
- Control of aircraft and missiles (to include airspace management functions) capabilities.

Sorties in excess to Marine air-ground task force (MAGTF) needs may be provided to the JFC for tasking by the JFACC. For more information on the MARFOR as JFACC, see Appendix B, BCD Relation to the NAVFOR and MARFOR.

Special Operations Forces

Coordination of SOF with the BCD and all other components is conducted by a special operations coordinator (SOCOORD) or a special operations command and control element (SOCCE) at the appropriate level. For additional information, see JP 3-05 and FM 100-25.

Section IV. BCD RELATION TO MULTINATIONAL FORCES IN COALITION OPERATIONS

BCD Role with Multinational Forces

Multinational force structures bring widely varying capabilities to joint and combined operations. These capabilities fall within each of the functional areas addressed earlier.

Normally, multinational forces provide liaison to the JAOC to represent their capabilities, limitations, and requirements. The COMARFOR and BCD must understand how these multinational force capabilities or limitations affect ARFOR operations.

BCD Role In Support of Coalition Force Operations

A BCD is not immediately available in all theaters. However, joint contingency planning may provide all or part of existing BCDs to support coalition force operations in any theater. During coalition and/or combined force operations a combined BCD may be formed.

The 1st BCD, supporting Forces Command (FORSCOM), is prepared to deploy anywhere in the world to support force projection and contingency operations. During several past contingency missions, 1st BCD was tailored or augmented to support operational requirements.

The United States Army Europe (USAREUR) currently fields an **augmentation** BCD built around the personnel of a unit previously known as the United States Army Liaison Group-United States Air Force Europe (USAFE). This liaison group was renamed the USAREUR BCE in October 1995. This organization provides the nucleus for establishing a BCD to perform BCD functions and support joint operations in Europe.

In the US Pacific Command (USPACOM), there are two BCD prototypes. Detachment 1, Eighth U.S. Army (EUSA) BCD, is assigned to the Combined Forces Command and is located with the Air Component Command, Osan Air Base, Korea. It represents US Army interests in a combined force BCD structure

composed of both US Army and Republic of Korea Army personnel. It coordinates coalition army group-level peninsula operations. 2d BCD, a US Army Reserve (USAR) unit, supports US Army Pacific (USARPAC) and USPACOM.

These BCDs and ARFOR planners must be sensitive to differences within the coalition force structure to include language barriers, organization, capabilities, sustainment, and doctrine.

CHAPTER 2
BCD ORGANIZATION, MANNING, AND RESPONSIBILITIES

When the joint force is established the BCD must coordinate early with the JFACC for working areas. Available space may be constrained, especially when the JAOC is sea-based. BCD personnel are integrated in their functional counterpart work areas to ease coordination. The BCD organuation reflects the need to collocate BCD functions within the JFACC JAOC structure, and gives the flexibility needed to tailor the BCD to support potential contingency missions.

Section I. BCD ORGANIZATION AND RESPONSIBILITIES

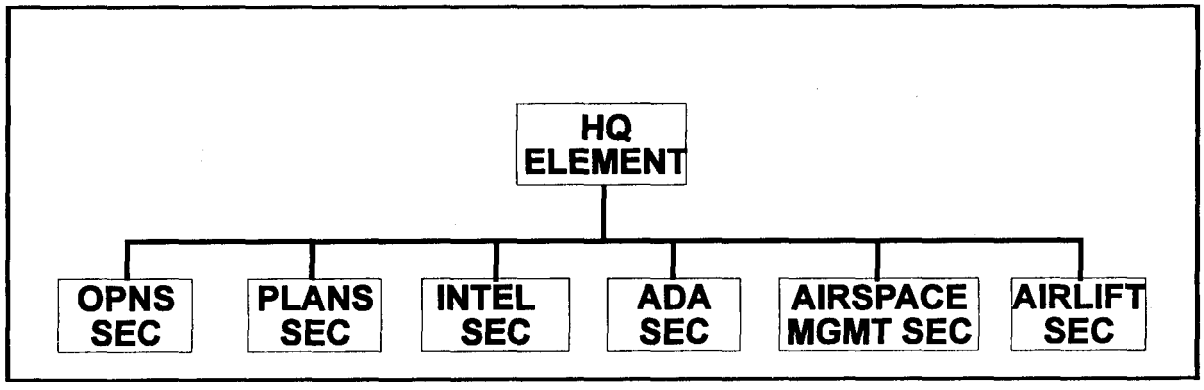
BCD Organization

The BCD consists of 39 personnel organized into seven sections (see) as follows:

- Headquarters (HQ).
- Plans.
- Operations (OPNS).
- Intelligence (INTEL).
- Airspace management (MGMT).
- ADA.
- Airlift.

The figure below depicts the BCD organization.

BCD ORGANIZATION



Headquarters Element

The HQ section provides C2 to the BCD. The HQ section ensures that all administrative functions pertaining to the overall operation of the BCD are planned, coordinated and executed. The HQ section establishes contact with the headquarters providing the JAOC to coordinate administrative matters. The functions of the HQ section include, but are not limited to:

- Organize the sections of the BCD for conduct of daily operations.
- Ensure all incoming messages routed to the BCD are screened and distributed to the appropriate sections.
- Ensure all outgoing messages are in the proper format and that file copies are retained in the journal.

- Reproduce and disseminate documents to various other sections.
- Provide administrative support as needed.
- Collect log journals from each BCD section and maintain the official historical file.
- Coordinate with the organization providing the JAOC for issue of office supplies.
- Determine and announce the location of support facilities.
- Coordinate transportation to and from work areas.
- Maintain accountability of BCD personnel.
- Coordinate signal support provided to the BCD.
- Deploy and connect communications and information processing equipment into operating configurations.

Operations Section

The BCD operations section consists of operations personnel that collocate with combat operations personnel of the JAOC. The operations section monitors and makes changes to "today's" (O to 24 hours out) war. The section ensures current theater air combat operations are synchronized with current Army combat operations. The section takes actions to integrate attack of emerging targets into current operations. Digital information systems support the coordination and execution of current operations. including digital update of current situation graphics. The functions of the operations section include, but are not limited to:

- Monitor execution of the current ATO in regard to sorties planned against land force nominated targets.
- Coordinate with the ARFOR TOC, deep operations coordination center (DOCC), TMD cell (for TM targets), and JAOC combat operations section on canceled, diverted, or reroled missions planned against ARFOR targets.
- Report ARFOR target validation and refinement (usually 8 and 4 hours before time on target) for AI, EW, PSYOP leaflet drops, and PSYOP command net interdiction missions supporting the ARFOR.
- Coordinate with the JAOC combat operations division on ARFOR immediate requests for AI, EW, PSYOP, and reconnaissance flights.
- Get the current friendly ground force situations from the ARFOR G3 operations sections.
- Interpret the enemy and friendly ground forces situation (maintain current situation map) for the JAOC. Inform the JAOC combat operations division of significant changes in operations, objectives, and priorities.
- Provide ground liaison officers (GLOs) and other BCD sections with periodic updates on the current situation.
- Coordinate firing of immediate ATACMS missions with the JAOC combat operations section and BCD airspace management section.
- Coordinate immediate special electronic mission aircraft (SEMA) missions with the JAOC combat operations section and BCD airspace management section.
- Report the use of air deliverable mines to the ARFOR.
- Coordinate changes to the FSCL and other FSCMS with the JFACC staff.

- Pass JFACC requests for immediate ATACMS and other support to the ARFOR DOCC, TMD Cell (for TM targets), or FSE as directed.

- Coordinate and synchronize current ARFOR aviation and deep attack (airborne, air assault, attack aviation) operations with the BCD airspace management section and JAOC combat operations.

- Coordinate with PSYOP planners in the integration of leaflet drops and commando solo broadcasts into the ATO cycle.

- Deconflict proposed ATO mission changes beyond the FSCL with friendly forces (for example SOF) forward of the forward line of own troops (FLOT) and with restrictive FSCMs (protected and restricted targets).

Plans Section

The BCD plans section consists of plans personnel that collocate with the JAOC combat plans personnel. The plans section focuses on operations conducted 24 to 96 hours out. The plans section performs two important functions. The first is to is to integrate and synchronize air operations planning with the COMARFOR intent and scheme of maneuver. Secondly, the plans section ensures his guidance and priorities are used to enhance air support to the ARFOR. Digital information systems support the coordination of plans and operational graphics. The section also integrates COMARFOR requirements for intelligence collection, PSYOP, and EW with JFACC requirements.

There is no engineer staff officer in the BCD. Therefore, infrastructure targets and remotely delivered minefield planning are done at the deep operations coordination cell (DOCC) in the corps or division headquarters. Terrain visualization information is similarly obtained. This information and staff coordination are key to synchronized deep targeting.

The plans section performs many functions to support COMARFOR requests for preplanned air support:

- Obtain as appropriate from the ARFOR G3 air and plans section the following:

  -Operations plans (OPLANs).

  -Ooperations orders (OPORDs).

  -Overlays.

  -24 to 96 hour projections of the COMARFOR concept of operation, targeting priorities, and target nominations for AI, CAS, reconnaissance (RECCE), EW, and PSYOP.

- Give the COMARFOR and staff the concept of operations and weight of effort for CAS and AI target priorities, RECCE, EW, battle status, and nuclear weapons employment information from the JAOC.

- Maintain ground situation maps portraying current enemy situation, projected friendly and enemy situation (24 to 96 hours) with supporting graphics, and AI, CAS, RECCE, PSYOP, and EW target nominations.

- Coordinate with the airspace management section on operations 24 to 96 hours out and their impact on current and planned airspace control measures.

- Coordinate planned ATACMS missions with the JAOC combat plans section and the BCD airspace management section.

- Pass projected JFACC requests for ATACMS and other tire support to the COMARFOR.

- Inform JAOC plans of ARFOR aviation operations.

- Ensure COMARFOR target nominations are submitted within timelines of the established ATO planning cycle.
- Ensure COMARFOR target nominations are deconflicted throughout the ATO planning process.
- Represent COMARFOR interests during guidance, apportionment, and targeting (GAT) and master air attack plan (MAAP) meetings with the combat plans and intelligence sections of the JAOC. Provides feedback to the COMARFOR on target nominations approved for ATO planning.
- Brief the JFACC and the combat plans and intelligence sections during the GAT meeting on:

  -Current and projected enemy situation.

  -Current and projected friendly situation.

  -The COMARFOR's intent, planned concept of operation, targeting guidance, target nominations for AI, and phase lines anticipated to be designated as FSCLs during the conduct of operations.
- Give GLOs and other BCD sections information on COMARFOR's planned operations.

Intelligence Section

The BCD intelligence section serves the BCD commander, all BCD sections, and the JAOC to which the BCD is liaison, as a one-stop COMARFOR land warfare intelligence liaison. This structure benefits from unity of direction and training under a single senior Military Intelligence officer. Digital information systems support the exchange and coordination of intelligence data and requirements, including update of planning and operational graphics. The intelligence function of the BCD is that of liaison and coordination, not that of an ACE.

The BCD intelligence section personnel collocate with combat operations and combat plans intelligence personnel of the JAOC. The section supports both the BCD operations and plans sections in execution of their functions. BCD intelligence functions include but are not limited to the following:

- Support the operations section in target validation and refinement (usually 8 and 4 hours before time on target) for all missions supporting the ARFOR.
- Support the operations section coordination with the JAOC combat operations division on ARFOR immediate requests for RECCE.
- Relay real-time significant intelligence information recieved by the following:

  -Joint surveillance and target acquisition radar system (J-STARS).

  -Guardrail.

  -U-2.

  -Unmanned aerial vehicle (UAV).

  -Other collection platforms.
- Coordinate emerging targets information with the ARFOR TOC and validate them for immediate diverts. Keep the operations section informed of the targets.
- Get the most current enemy ground force situations from the ARFOR G2 operations sections.
- Interpret the enemy ground forces situation (maintain current enemy situation map), inform the operations section and plans sections of apparent

changes in enemy operations, objectives, and priorities.

- Process mission reports (MISREPS) and other battle damage assesment (BDA). Forward BDA information to the COMARFOR. Exchange information to answer combat assessment and BDA questions.
- Help plans section integrate COMARFOR requirements for intelligence collection and EW with JFACC requirements.
- Get the PIRs, collection plan, targeting data, 24 to 96 hour enemy situation projection, and nominations for reconnaissance and intelligence EW support from the ARFOR G2 plans section.
- Support the plans section by maintaining ground situation maps of current and projected enemy situations (24 to 96 hours) with supporting graphics, reconnaissance, and EW target nominations.
- Support plans section briefings to the JAOC staff on the current and projected enemy situation.

Air Defense Section

The BCD air defense (AD) section supports both the BCD plans and operations sections. The AD section coordinates COMARFOR AD matters with the JAOC combat plans and operations divisions and the ARFOR ADA headquarters. Digital information systems support the exchange and coordination of air defense and airspace management information. The AD section performs the following functions:

- Coordinate with the ARFOR air defense element (ADE) and ADA brigade headquarters for the following:

  -Locations of ADA assets.

  -Engagement reporting.

  -ADA weapon engagement zones.

  -Identification of friend or foe (IFF)/selective identification feature (SIF) procedures.

  -Receipt of ADA annexes to OPLANs/OPORDs.

- Advise the area air defense commander (AADC) on Army air defense matters appropriate to deconfliction of air support to ground operations.
- Coordinate with the control and reporting center (CRC) the following

  -ADA unit status.

  -Changes in AD warning (ADW).

  -Weapons control status (WCS).

  -Rules of engagement (ROE)

  -Identification procedures.

  -Early warning and tactical ballistic missile (TBM) alert procedures.

- Advise the senior air defense officer (SADO) in the JAOC of Army air defense status to include placement of ADA weapons in direct support of ground forces.
- Provide Army ADA commander with the AADC's intent.
- Coordinate with the ARFOR TMD cell for TBM alert dissemination procedures.
- Exchange ADA operational data with JAOC counterparts.
- Coordinate ADA airspace needs with the JAOC airspace management and BCD airspace management sections.

- Support integration of the COMARFOR AD plan with the JFACC counterair effort.

Airspace Management Section

The JFC establishes procedures for integration of the joint use of airspace. The airspace management section collocates with the airspace management section of the combat operations division of the JAOC. It coordinates and assists in the use of airspace defined by the joint operation plan or order. The BCD airspace management section supports both the BCD plans and operations sections. All ARFOR elements using joint airspace must be integrated into the airspace control plan (ACP) developed by the ACA as directed by the JFC. Digital information systems support the exchange and coordination of airspace management information. The section maintains identification of all ARFOR airspace users. ARFOR airspace users include the following:

- Fire support.
- ADA operations.
- Army aviation operations.
- SEMA operations including UAVs, medical evacuation aircraft, and combined and joint operations.

Airspace management requires coordination with both plans and operations personnel within the JAOC. The BCD airspace management section performs the following functions:

- Coordinate ARFOR airspace use requirements with the JAOC airspace management sections.
- Coordinate SOF airspace requirements when directed.
- Integrate joint airspace requirements with appropriate A^2C^2 elements.
- Integrate ARFOR airspace user activities with the JAOC airspace plans.
- Represent COMARFOR interests in the development and approval of airspace control measures and restrictions published in the ACO.
- Advise the ACA and BCD commander of significant activities which affect the joint use of airspace.
- Advises the ACA and BCD commander on the impact of joint airspace control measures or restrictions on the conduct of the ground battle.
- Coordinate COMARFOR requests for airspace control measures and restrictions to include EW requirements.
- When necessary, ensure Army aviation missions are included in the joint-ATO for the purpose of coordination. In stability and support operations (SASO), all rotary-and fixed-winged aircraft are normally included in the ATO. In combat operations, SEMA and operational support airlift (OSA) will normally be included.
- Ensure all A^2C^2 elements have the necessary IFF/SIF codes.
- Provide timely and complete distribution of the ACP to the ARFOR TOC A^2C^2 element.
- Monitor the integration of Army air traffic services (ATS) facilities into the airspace control system of the JAOC.
- Represent the ARFOR in developing the ACO.
- Provide the ACA with the location and status of Army airfields, navigation aids (NAVAIDs), standard use Army aviation flight routes (SAAFRs), and ATS facilities.

- Coordinate with the following sections on airspace matters:

  -The BCD plans section for future Army aviation, military intelligence (MI), plans, and other airspace matters.

  -The BCD operations section on current airspace use.

  -The JAOC combat plans division for requests for future airspace control measures, scheduling of ARFOR aircraft into the ATO, and Army IFF/SIF codes.

  -The JAOC combat operations division for changes to the ATO/ACO; ARFOR IFF/SIF codes; immediate requests for special use of airspace (including immediate establishment of restricted operating zones to support ATACMS tire missions); and the location and status of Army airfields, ATS facilities, NAVAIDS, and SAAFRs.

  -ARFOR TOC A^2C^2 cell on Army aviation plans, IFF/SIF code requirements and assignments, airspace control measure requests, SAAFR NAVAID, airfield, and ATS facility status, and the ATO/ACO.

  -Army aerial exploitation battalion TOCs on their use of airspace.

Airlift Section

The BCD airlift section serves as the ARFOR liaison to the JFACC for issues concerning airlift support for ARFOR missions. The section integrates the theater ground situation into the theater airlift support management process. The section is normally collocated with the ALCC in the JAOC. The BCD airlift section supports both BCD plans and operations sections. The airlift section has the following responsibilities:

- Brief the ALCC and staff on COMARFOR objectives, concept of operations, and airlift requirements.
- Coordinate immediate airlift requests to support ARFOR operations.
- Coordinate locations of drop zones (DZs), pick-up zones (PZs), and landing zones (LZs) to include the planned activities and control procedures used, with the director of mobility forces (DIRMOBFOR).
- Notify the DIRMOBFOR immediately of changes to the ARFOR plan that affect airlift operations.
- Coordinate with the ARFOR theater ATS and airspace section for establishment of new base defense zones (BDZs) and corresponding instrument approach procedures.
- Provide the COMARFOR and his staff the following:

  -Feedback on COMARFOR requests for preplanned airlift routed through logistic channels.

  -Feedback on COMARFOR requests for immediate airlift routed through command channels, to include "heads up" mission planning with USAF airlift planners.

  -Availability and operational status of airlift aircraft and airlift priorities as assigned by the JFC.

  -Status of airlift missions being executed in support of ARFOR operations.

  -Theater planning parameters (for example, airfields and staging capacities, handling equipment

availability, refueling capabilities) that drive the size and sustainment of potential airlift, airdrop, airborne, and air assault operations.

- Coordinate with the theater army movement control agency (TAMCA) and/or the ARFOR G4 to determine the location of arrival and departure airfield control groups (A/DACGs) and number and type of material handling equipment (MHE) available with each of them.

- Provide the status of airlift operations to the BCD commander, to include the following:

  -Airlift priorities.

  -Number and type of aircraft available.

  -Number of preplanned and immediate airlift requests received.

  -Current status of missions being flown in support of ARFOR operations.

- Coordinate with the BCD operations section for friendly and enemy ground order of battle information, and give them updated airlift information as required.

- Perform the following operational requirements:

  -Facilitate, coordinate, and synchronize immediate and preplanned airlift requests with the JMC, the TAMCA, and/or ARFOR G3 air and G4 transportation.

  -Get current airlift ATOs from the ALCC and send them to the ARFOR G3 air and G4.

- Track current airlift missions flown in support of ARFOR operations.

- Ensure GLOs at airlift wings have current information on the friendly and enemy situations.

BCD Relationship to Ground Liaison Officers

The GLOs are US Army personnel who conduct liaison with USAF numbered air force (NAF), fighter, theater air control, RECCE, and airlift units. They advise air commanders primarily on Army organization, operations, tactics, and equipment. They help the commander by coordinating with Army units during joint operations.

The US Army aligns GLOs to designated USAF NAF wing and squadron headquarters. The GLOs are permanently stationed with the USAF unit and function as a special staff element in the unit headquarters. The NAF GLO acts as the senior Army officer in the respective NAF structure. The NAF GLO helps the BCD in coordinating the operational, administrative, and logistical issues with the USAF headquarters that the BCD will support before a deployment on any type of operation. The GLOs assigned to the NAF maybe under the operational control of the BCD commander.

A GLO may also represent the COMARFOR and/or subordinate commander aboard the airborne battlefield command and control center (ABCCC). The liaison between the ABCCC, BCD, and ground maneuver forces is key to good CAS management. The ABCCC can provide accurate and timely BDA to all services via the liaison network in the JAOC. The BCD commander **must** ensure the liaison requirement for ABCCC be provided as soon as possible when deployed to the area of responsibility (AOR).

Per memorandum of agreement (see references), the USAF host unit includes the GLO on mobility requirements and provides needed items of organizational equipment, to include individual weapons. The GLOs deploy with their USAF unit during combat contingencies. They will be listed on unit time-phased force deployment lists. The GLO performs the following duties:

- Advise air commanders on ARFOR organization, operations, tactics, and equipment.

- Advise air commanders on ARFOR organization, operations, tactics, and equipment.
- Help prepare base defense plans and take an active part in defending the installation in combat.
- The GLOS assigned to NAF headquarters may act as members of the ARFOR BCD located at the JAOC.
- Continuously examine and recommend improvements where appropriate of air and ground procedures of interest to aircrews such as the following:

  -Briefing and debriefing.

  -Target designation and identification of friendly troops.

  -Employment attack and reconnaissance options.
- The GLOs may help the USAF unit commander by performing additional duties as a member of the operations group staff. The commander must ensure the tasks assigned are within the capabilities of the GLO and they do not affect his primary mission.
- Where possible, GLOs will fly in, and become familiar with, host unit primary mission aircraft.

Section II. BCD PERSONNEL AND DUTIES

Manning

The BCD is manned as shown in the table on the next page.

BCD PERSONNEL

	NUMBER
HEADQUARTERS ELEMENT:	
COMMANDER	1
DEPUTY COMMANDER	1
OPERATIONS SERGEANT	1
ADMINISTRATION SERGEANT	1
SENIOR INFORMATION SYSTEMS OPERATOR	2
OPERATIONS SECTION:	
OPERATIONS OFFICER	1
DEPUTY OPERATIONS OFFICER	1
SENIOR FIRE SUPPORT NCO	1
FIRE SUPPORT SERGEANT	2
PLANS SECTION:	
PLANS OFFICER	1
DEPUTY PLANS OFFICER	1
TARGETING OFFICER	1
SENIOR FIRE SUPPORT NCO	1
TARGETING NCO	1
FIRE SUPPORT SERGEANT	2
INTELLIGENCE SECTION:	
INTELLIGENCE OFFICER	1
DEPUTY OPERATIONS INTELLIGENCE OFFICER	1
PLANS INTELLIGENCE OFFICER	1
DEPUTY PLANS INTELLIGENCE OFFICER	1
OPERATIONS INTELLIGENCE SERGEANT	1
OPERATIONS SR INTELLIGENCE ANALYST	1
OPERATIONS INTELLIGENCE ANALYST	1
PLANS INTELLIGENCE SERGEANT	1
PLANS INTELLIGENCE ANALYST	1
AIR DEFENSE SECTION:	
ADA OFFICER	1
AD FIRE COORDINATION OFFICER	1
PATRIOT OPERATIONS SERGEANT	2
AIRLIFT SECTION:	
AIRLIFT OFFICER	1
DEPUTY AIRLIFT OFFICER	1
TRANSPORTATION LOGISTICS NCO	1
MOVEMENTS SUPERVISOR	1
AIRSPACE MANAGEMENT SECTION:	
AIRSPACE MGMT OFFICER	1
DEPUTY AIRSPACE MGMT OFFICER	1
AIRSPACE MANAGEMENT NCO	2
TOTAL PERSONNEL:	39

NCO=noncommissioned officer

Headquarters Element

BCD Commander

The BCD commander is the senior Army liaison officer at the JAOC. He has the responsibility of representing and coordinating COMARFOR interests with the JFACC. The relationships between the BCD commander, the JFACC, and other service and coalition representatives are critical. A major component of a well executed plan is trust built through close relationships. The COMARFOR trusts the JFACC to support ground operations with adequate air power. The "art" of liaison is to build and maintain this trust and confidence.

The BCD commander builds a working environment which supports the following:

- Open expression of COMARFOR priorities.
- Causes the JFACC to seek out the BCD commander's advice.
- Reinforces the BCD commander's credibility in speaking for the COMARFOR.

This relationship is especially critical when the BCD commander represents the COMARFOR at meetings where each service and country vies for limited resources.

The BCD commander's responsibilities include the following:

- Establish the BCD.
- Ensure ARFOR operations are supported by coordinated planning and execution of the ATO.
- Effectively integrate liaison personnel provided by the ARFOR, joint service, and coalition force headquarters into the BCD.
- Ensure that liaison takes place.
- Integrate and synchronize ARFOR deep operations and intelligence assets with those of the JFACC.
- Advise both the COMARFOR and the JFACC regarding coordination activities.

As a result the BCD commander must work closely with the ARFOR G3 and DOCC.

BCD Deputy Commander

The BCD deputy commander performs duties assigned by the BCD commander. Some of the duties of the BCD deputy commander include the following:

- Supervise the BCD in the absence of the commander.
- Supervise the plans and operations sections with regard to current operations (for example the status of ATACMS, TMD, and order of battle status, and development of the designated target lists).
- Integrate and synchronize the land commander's deep operations assets with those of the JFACC.

Operations Sergeant

The operations sergeant is assigned duties by the BCD commander as both his senior enlisted advisor and the senior operations sergeant of the BCD. The duties and responsibilities may include the following:

- Supervise administration and logistics for the BCD.
- Supervise establishing of BCD operations.
- Work on a shift in the plans and operations sections.
- Coordinate BCD life support needs with the JAOC host.

Administration Sergeant

The administration (admin) sergeant performs duties assigned by the operations sergeant for the administration of BCD activities. These include the following:

- Perform personnel and logistics administration tasks.
- Help establish communications and automatic data processing links with designated headquarters.

Experience or training in both Army and joint force communications-electronics systems and administrative procedures is key to the performance of duties.

Senior Information Systems Operator

The senior information systems operators' primary responsibility is to establish and troubleshoot the communications-electronic links from the BCD to the ARFOR, JAOC and command designated agencies. Vital to performing the duties is experience or training in the following:

- Army global command and control systems (AGCCS).
- USAF contingency theater automated planning system (CTAPS).
- Associated software protocols.

Operations Section

Operations Officer

The operations section chief of the BCD is the senior Army representative to the JAOC combat operations division. This job most closely resembles that of the current operations officer on a corps staff. Primary duties include the following:

- Update the JAOC combat operations division on the current friendly and enemy operations, scheme of maneuver, targeting concept and priorities, current FSCMs.
- Monitor execution of all ARFOR scheduled AI targets on the current ATO.
- Coordinate changes (diverts, reroles) with the senior operations duty officer of the combat operations division.
- Coordinate air support for ground operations in the ARFOR deep battle area.
- Recommend real-time changes to the ATO.
- Give guidance to airspace managers on airspace deconfliction to avoid fratricide.
- Help coordinate ATACMS and attack helicopter missions for ARFOR TMD and other operations.
- Ensure ground operations and order of battle maps are current.
- Brief the command group on current and future ARFOR operations.

Deputy Operations Officer

The deputy operations officer normally performs duties as the night shift operations officer. His duties are the same as the operations officer.

Senior Fire Support NCO

This senior NCO supervises the day-to-day operations in the section. He is responsible for the setup and operation of the section. His duties include the following:

- Set up the map board depicting the current friendly situation.

- Establish communication links with the ARFOR G3 current operations section and deep operations coordination center (DOCC) and TMD Cell.
- Operate the following systems:

  -Standard theater army command and control system (STACCS).

  -CTAPS.

  -Automated field artillery tactical data system (AFATDS).
- Help coordinate all FSCMS with the JAOC, including changes to current FSCM.
- Monitor JFACC compliance with FSCM.

The responsibilities require an additional skill identifier (ASI) of F9, AFATDS operator/supervisor.

Fire Support Sergeant

This NCO performs duties assigned by the senior fire support sergeant. He act in place of the senior fire support sergeant in his absence. These responsibilities require an ASI of F9, AFATDS operator/supervisor.

Plans Section

Plans Officer

The plans officer supervises the plans section. He is the senior Army representative to the JAOC combat plans division. He is responsible for the overall functioning of the plans section of the BCD. His primary duties are to coordinate with the JAOC staff to integrate and synchronize the application of air power for ARFOR plans. His duties also include keeping the JAOC combat plans division informed on the following:

- Friendly and enemy operations and scheme of maneuver, targeting concept and priorities
- Planned FSCMs.
- Munitions or targeting restrictions that may affect air operations planning.
- AI and preplanned CAS requests.

In addition, he provides information on JFACC capabilities and plans to the ARFOR TOC plans element.

Deputy Plans Officer

This officer assists the plans officer and performs in that capacity when required. Duties include the following:

- Supervise preparing target lists for targeting board meetings.
- Validate target list input from supported ARFOR headquarters.
- Brief target selection and justification.
- Brief ARFOR plans to the JAOC staff.
- Train personnel in the targeting process.

His duties most closely resemble those of a targeting officer at an ARFOR TOC fire support element (FSE).

Targeting Officer

The targeting officer is a senior warrant officer. He performs duties assigned by the operations officer. These duties include the following:

- Receive and help integrate target lists from the ARFOR TOC into the joint target list.
- Coordinate and integrate the ARFOR target list during development of the ATO.

- Answer questions regarding ARFOR target list priorities, timing of attack, desired means of attack, and desired effects.
- Provide update briefings as required on the status and operation of ARFOR deep operations assets.
- Supervise operation of AFATDS for target development and information exchange with the ARFOR TOC.

Senior Fire Support NCO

The senior fire support NCO performs duties assigned by the plans officer, including the following:

- Supervise the normal day-to-day operations of the section.
- Supervise operation of communications-electronic equipment including STACCS, CTAPS, and AFATDS.
- Assist coordinating all FSCM with the JAOC.

These responsibilities require an ASI of F9, AFATDS operator/supervisor.

Targeting NCO

This senior NCO performs duties assigned by the section noncommissioned officer in charge (NCOIC) and is responsible for setup and operation of the section. Duties include the following:

- Set up the map board depicting the planned friendly situation.
- Establish communication links with the ARFOR G3 plans section, DOCC, and TMD cell.
- Process ARFOR requests for AI and CAS by using STACCS, CTAPS, and AFATDS.

An ASI of F9, AFATDS operator/supervisor is required.

Fire Support Sergeant

This NCO performs duties assigned by the section NCOIC. These include assisting the senior fire support and targeting NCOs in the performance of their duties.

Intelligence Section

Intelligence Officer

The intelligence officer supervises the overall activities and training of the intelligence section. This officer ensures intelligence personnel support is provided to the BCD operations and plans sections. He also ensures liaison is established with the intelligence staff of the JAOC combat operations and combat plans divisions. The intelligence officer coordinates activities to ensure the flow of intelligence and information between the BCD with other intelligence organizations. He prepares and presents intelligence briefings as needed. He provides ARFOR intelligence input to joint targeting needs.

Deputy Operations Intelligence Officer

The deputy operations intelligence officer is responsible for intelligence and enemy ground order of battle for the current ATO. He ensures the flow of information between the intelligence operations section of the supported ARFOR and JAOC. His duties include:

- Interpret the enemy ground order of battle for the combat intelligence division (CID) of the JAOC.
- Help the CID with target intelligence development.
- Track the current enemy situation and recommend targets for reroles and diverts.

- Ensure validation of ARFOR target nominations at a designated time (for example 4 or 8 hours before time on target).
- Coordinate the exchange of BDA reports from the current ATO between the ARFOR and the JAOC.

His duties may also include the following:

- Perform as threat officer, responsible for current ground forces intelligence, tracking, and analysis.
- Maintain access to theater and national collection platforms tracks to validate key targets on the ATO.
- Analyze and confirm emerging targets with the JFACC and/or ARFOR intelligence staff.

Operations Intelligence Sergeant

The operations intelligence NCO supervises the day-to-day intelligence operations. He helps the senior fire support NCO with the setup and operation of the operations section to include the following:

- Maintain the intelligence map board (digital or map overlay) depicting current enemy situation and communications links between the intelligence section and the ARFOR and AFFOR.
- Coordinate current intelligence with the BCD plans section.
- Coordinate map requests to support the BCD mission.
- Supervise the section operations intelligence analysts.

This NCO maybe tasked to brief senior officers and visiting dignitaries regarding intelligence activities and status.

Operations Intelligence Analysts

The analysts perform duties under the supervision of the operations intelligence sergeant. Their duties are as follows:

- Post enemy information on the mapboard (digital or map overlay).
- Maintain a local enemy ground order of battle database or file.
- Plot all enemy movement and actions.
- Maintain all information related to the enemy
- Maintain the intelligence workbook and journal.

They assist JAOC intelligence staff analysis of emerging targets supporting ARFOR ground operations. These NCOs maybe tasked to brief senior officers and visiting dignitaries regarding intelligence activities and status.

Plans Intelligence Officer

The intelligence officer is responsible for intelligence and enemy ground order of battle for future ATOs. He also provides the interface with the collection management branch of the supported ARFOR and AFFOR. His duties include the following:

- Interpret the enemy ground order of battle for the CID of the JAOC.
- Monitor the information from the J-STARS.
- Help JAOC analyze targets supporting ARFOR mission type requests for air support to ground operations. He validates them for integration on the ATO.
- Request and interpret ARFOR G2 intelligence preparation of the battlefield (IPB) products that support JAOC

intelligence staff analysis of targets that support ARFOR mission type requests for air support.

- Attend targeting board meetings to brief the projected enemy ground situation.
- Review BDA from the current ATO.
- Recommend changes to targeting for future ATOs in coordination with the DOCC and TMD cell.

Deputy Plans Intelligence Officer

The deputy plans intelligence officer helps in and performs the duties of the plans intelligence officer during shifts. Duties reflect those of the plans intelligence officer.

Plans Intelligence Sergeant

The plans intelligence NCO performs duties simular to the corps or division intelligence operations NCOIC. His duties include the following:

- Supervise the night shift operations within the plans section.
- Supervise set up of the digital or manual mapboard depicting current enemy situation and communications links between the supported ARFOR and JAOC.
- Coordinate future intelligence requirements.
- Help JAOC analyze targets supporting ARFOR mission type requests for air support to ground operations. He also validates them for integration an the ATO.
- Validate ARFOR target nominations by using the current automation system.
- Receive and relay BDA to the ARFOR G2 or JAOC intelligence staff as appropriate.

This NCO maybe tasked to brief senior officers and visiting dignitaries regarding intelligence activities and status.

Plans Intelligence Analyst

The plans intelligence analyst performs duties under the supervision of the plans intelligence sergeant. Some of his duties areas follows:

- Maintain the enemy situation mapboard.
- Maintain status of intelligence communications links between the supported ARFOR and JAOC.
- Help JAOC analyze targets supporting ARFOR mission type requests for air support to ground operations. He also validates them for integration on the ATO.
- Validate ARFOR target nominations by using the STACCS or current automation system.
- Receive and forward BDA to the ARFOR G2 or JAOC intelligence staff as appropriate.

These NCOs maybe tasked to brief senior officers and visiting dignitaries regarding intelligence activities and status.

Air Defense Section

Air Defense Officer

The AD officer represents the Army air and missile defense artillery within the JAOC. His duties include the following:

- Inform the JAOC SADO and JFACC on the status of ARFOR air and missile defense matters

- Coordinate with space command elements, and the TMD Cell, regarding TBM warnings.
- Coordinate active, passive and attack operations for the TMD mission.
- Integrates and provides liaison for ARFOR AD with that of joint services, coalition forces, and the JFACC counterair effort.

ADA Fire Coordination Officer

The fire coordination officer assists the air defense officer and acts in his place when required. His duties include the following:

- Integrate ARFOR TMD weapons systems (for example Patriot) and their command and control with JAOC counterair plans.
- Monitor the status of TMD weapons systems.
- Give updates to the BCD ardor JFACC staffs.

Patriot Operations Sergeants

The Patriot operations NCOs perform duties assigned by the air defense officer. These duties include the following

- Coordinate ARFOR AD operations with JAOC counterair operations.
- Monitor and report ARFOR AD operations to the JAOC.
- Establish communications with the ARFOR ADA headquarters if directed by the ARFOR TOC.
- Speed early warning to ARFOR ADA headquarters or the ARFOR TOC in support of the ARFOR TMD mission.
- Operate in the ballistic missile command, control, communications, computer, and intelligence (BMC^4I) architecture for TMD operations.
- Use the forward area air defense command, control, communications, and intelligence (FAADC3I) automation system.
- Report JFACC counterair operations to the ARFOR TOC.

Airspace Management Section

Airspace Management Officer

The airspace management officer supervises activities of the airspace management section. He performs the following duties:

- Coordinates all airspace control measures requested and received from the ARFOR TOC A^2C^2 element with the airspace management section of the JAOC.
- Coordinates, with the DOCC and TMD Cell, airspace around launch and target points for ATACMS missions to prevent fratricide.
- Deconflicts gun target lines for indirect tire weapons in support of the ARFOR with established ACMs.
- Coordinates with the JAOC all Army aerial assets, including SEMA and UAV operations, to synchronize their operation and deconflict airspace.
- Tracks location and status of ARFOR air traffic control (ATC) terminal and approach facilities and NAVAIDs.
- Advises the JAOC on ail FSCM and ACM for Army missions, including those supporting ARFOR aviation and ATACMS missions beyond the FSCL.

Deputy Airspace Management Officer

The deputy airspace management officer is essential to 24-hour operations, The airspace management officer is required in the daytime to plan, coordinate, and synchronize proposed operations, The deputy must be available to assume the duties of the airspace management officer in his absence. In addition, the deputy must be able to troubleshoot the execution of all Army aviation operations during his tour of duty. Also, the deputy is key to continued planning, coordination, and synchronization of SEMA and UAV operations.

Airspace Management NCO

The airspace management NCO assists the airspace management officer in performance of his duties. His duties also include the following:

- Help prepare orders and reports where airspace management is required.
- Coordinate all ACM requested by the ARFOR with the JAOC.
- Report all ACM established by the JAOC which affect ARFOR operations.
- Maintain an automation system or a situation map depicting all ACMs.
- Establish communications links with the ARFOR and other organizations as needed.
- Ensure all ARFOR airspace requests are published in the ACO by the JAOC.

This NCO's air traffic control experience is key to coordination of airspace management with the JAOC.

Airlift Section

Airlift Officer

The airlift officer leads the airlift section. His duties are as follows:

- Coordinates theater tactical airlift support for ARFOR operations.
- Advises the ALCC chief and DIRMOBFOR on matters pertaining to airlift and airdrop support for Army operations.
- Interprets ARFOR mission objectives and scheme of maneuver for the ALCC staff.

The airlift officer coordinates life support requirements for the section with the ALCC when the section is located with the remote ALCC.

Transportation Logistics NCO

The transportation logistics NCO performs duties assigned by the airlift officer. He serves as the transportation liaison between the ARFOR and the AFFOR at the JAOC. His duties include the following:

- Advise the airlift officer and BCD staff on the preparation of operations orders where airlift transportation is required.
- Verify the accuracy of movement control documents.
- Help with evaluation of sites for air terminals.
- Determine the transportation capabilities and limitations of units.
- Ensure allocation of transport capability is appropriate to accomplish each mission in a cost effective manner.

The transportation logistics NCO is responsible for setup and operation of the section to include:

- Set up a method to depict the current enemy and friendly situation.
- Establish communication links with the ARFOR G4 section.

- Interprets tactical data concerning Army mission objectives and scheme of maneuver.
- Advise the airlift officer on matters pertaining to USAF airlift and airdrop support for Army forces.

Movements Supervisor

The movements supervisor is the NCO who maintains liaison with air transportation facilities supporting the ARFOR. His duties areas follows:

- Prepares, consolidates, and reviews technical, personnel, and administrative reports covering airlift transportation data (for example unit movement, personal property, passenger travel, freight, cargo, materiel).
- Checks, consolidates, and reviews movement needs.
- Ensures appropriate transport capability and prepares movements schedules.
- Helps the airlift officer in planning transportation needs for logistics support.
- Monitors and reports any diversion, reconsignment, or transfer of personnel, freight, and material shipments for airlift transportation.

Also, this NCO can plan and conduct training for supported ARFOR units on needs for coordination of airlift transportation.

Section III. BCD SUPPORT AND MATERIAL REQUIREMENTS

General

The BCD is not self-sufficient and has no organic transportation. The BCD depends on appropriate elements of the JFACC for all of the following:

- Quarters and rations.
- Security.
- Medical support.
- Common items of supply.
- Maintenance and logistics support.
- Internal communications support in the JAOC.
- Communications with the host JFACC organization.

The BCD must be capable of communicating (voice and data) with the ARFOR it represents. The BCD must also communicate with a remotely located airlift section and with Army GLOs. It depends on the appropriate elements of the ARFOR to which it is assigned for the following:

- Mobilization and deployment planning and support.
- Legal, finance, and personnel administrative services.

Religious and health service support must be provided by the JFACC where the BCD personnel are physically located.

Signal Support

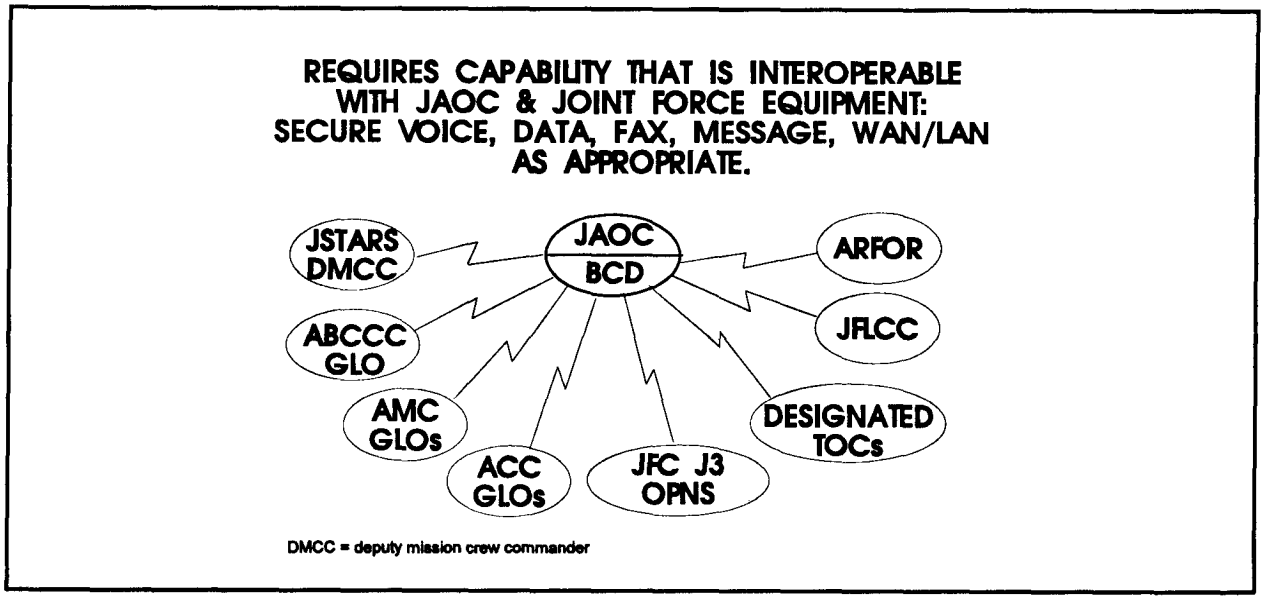
The BCD depends on the signal command designated to support the ARFOR commander for support of Army-specific communications systems. Under a single corps scenario, the BCD is supported by the signal brigade or battalion that supports the corps. Signal support is also provided by the JFACC via available communications nets, signal, and automation support equipment.

The BCD needs automation systems support which is Army technical architecture (ATA) compliant and interoperable with JFACC systems. Equipment that is interoperable allows for the exchange of information and requests for the following:

- Intelligence reports.
- Air tasking data.
- Airspace control data.
- Airlift support information.
- Logistics data.
- AD data
- Fire support information.
- Operational graphics.

BCD communications and automation systems must be capable of linking with supported ARFOR elements. The figure below depicts the communications links needed. Chapter four provides more details on communications and automatic data processing (ADP) needs.

BCD COMMUNICATIONS AND AUTOMATIC DATA PROCESSING REQUIREMENTS



Transportation Support

The supported ARFOR headquarters must provide transportation support for BCD personnel and equipment to the JAOC location. The supported ARFOR may make arrangements for transportation support with the host JFACC. Transportation for the BCD must be included in time-phased force deployment data (TPFDD).

Augmentation

The BCD organization may need augmentation to meet theater-unique or extraordinary mission needs. Augmentation may be needed for both personnel and equipment. Communications and automation equipment are likely augmentation needs. However, experience has shown that short notice communications augmentation can degrade existing communications because "bugs" developed during installation. Augmentation needs vary with the mission and situation. Foresight in contingency planning is key to

identifying needs for both personnel and equipment and earmark these assets for mobilization and link-up.

Training

BCD personnel must be qualified in their military occupation specialty as early in their assignment as possible. Trained personnel can focuses on-collective and follow on training and sustainment of individual skills. Duties in the BCD are highly technical. Much of the individual training comes from the wide variety of courses taught at various service schools. The BCD conducts section collective training. Joint training exercises also provide a medium for collective training of the BCD. A more complete discussion of training for the BCD is contained in Appendix C.

A HISTORICAL PERSPECTIVE

In 1994, operational deployments to Haiti emphasized fixed- and rotary- winged airlift. The operations required meticulous coordination and identification of all aircraft on the ATO, including Army helicopters. The extensive airspace management challenge required augmentation from the XVIII Airborne Corps aviation brigade air operations staff officers to the 1st BCD plans section. Also, 1st Battalion, 58th aviation regiment (ATS) (Corps) provided external augmentation of senior NCOs in military occupational speciality 93C to the airspace management section.

Augmentation needs must be identified during deployment planning and updated as necessary by the ARFOR commander's staff.

Chapter 3
BCD OPERATIONS

Air suport and airspace management must be planned and employed in concert with the JFC's campaign plan. They ***must also support land and air operations plans in order to effectively synchronize air and ground operations. This chapter describes how the BCD sections ease the synchronization and&confliction of air-ground operations. Figures in this chapter reflect the ARFOR subordinate to the JFLCC. BCD operations described in this chapter apply to the association of the BCD with any echelon: ASCC, corps, or division.***

Section I. BCD FUNCTIONS DURING ATO DEVELOPMENT

Introduction

One must understand the joint environment in which the BCD operates in order to filly understand the functioning of the BCD. To promote clarity, the discussion in this chapter is based on the BCD relationship to a USAF JAOC. For the BCD relationship to the NAVFOR and MARFOR JAOC, see Appendix B. A more complete explanation of the joint environment is contained in JP 3-56.1.

Joint Force Air Component Commander

The JFC normally designates a JFACC to exploit the capabilities of joint air operations through a cohesive joint air operations plan with a responsive and integrated control system. The JFACC is normally the service component commander having the most air assets and the capability to control and direct joint air operations. He derives authority from the JFC. The JFACC's responsibilities normally include the following:

- Planning.
- Coordination.
- Allocation.
- Tasking.

All of these are based on the JFC's apportionment decision.

The JAOC is set up to operate as a filly integrated facility and staffed to fulfill all of the JFACC's responsibilities. Other service components provide liaison officers and staff augmentation as required to coordinate requestor needs and maintain an "up to date" picture of component operations. The result is a JAOC staff organized and manned so that component representation reflects the composition of the joint force.

BCD Interface with a JAOC

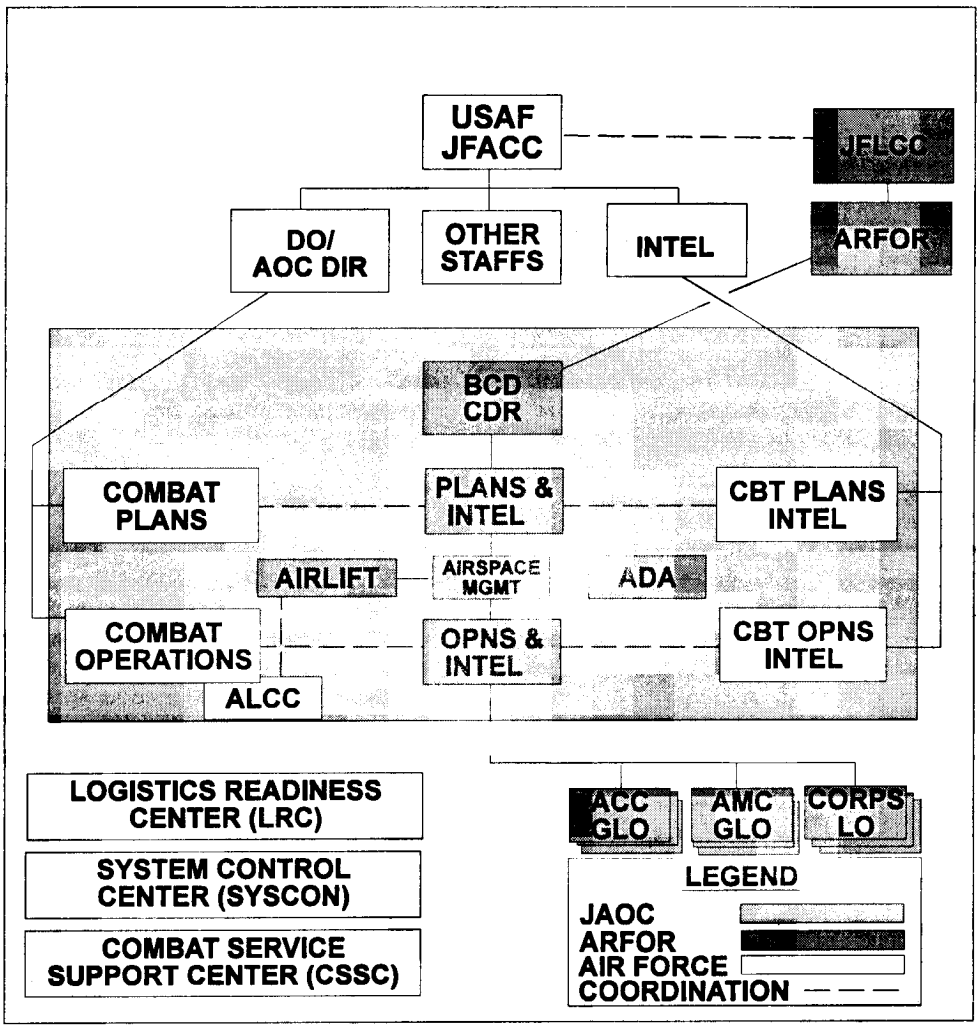
The BCD sections mesh with a USAF hosted JAOC as depicted in the figure on the next page. The links are primarily automated and comprised of both joint and services-unique systems. BCD sections do not operate independent of each other. They inform each other of current or future actions needing immediate or planned coordination. They also keep the ARFOR staff informed of the same and respond appropriately to COMARFOR requests for help.

In the figure on the next page the organization of a JAOC provided by the USAF as the JFACC is shone. If appropriate all of the following may reside in the JAOC:

- MARLO.
- NALE.
- USN surface operations liaison element.
- SOLE.

The director of combat operations (DCO) reports to the deputy commander for operations (DO) and is the director of the JAOC. Subordinate to the JAOC director are the chiefs of combat plans and combat operations. The director of combat intelligence (DCI) reports to the deputy for intelligence. Subordinate to the DCI is the chief of the CID who oversees combat plans intelligence and combat operations intelligence.

BCD - USAF JAOC RELATIONSHIP



Apportionment and Allocation Process

BCD personnel must understand and consider the apportionment and allocation process to coordinate the COMARFOR's air support and airspace requirements. The JFC, in consultation with his staff, the JFACC, and the component commanders, determines the air apportionment. The BCD commander provides technical advice and staff functional support to the COMARFOR as he prepares to meet with the JFC. The BCD also ensures the COMARFOR requirements are considered as the JFACC staff prepares the apportionment recommendation that is submitted.

Once the JFC makes his apportionment decision, the JFACC translates the apportionment decision into specific numbers of sorties by aircraft or weapons type available. The translation into sorties is called **allocation.**

Air Apportionment

The JFC orchestrates component operations by assigning missions and apportioning forces. Air apportionment lets the JFC ensure the weight of the joint air effort is consistent with his concept of operations and objectives. Air apportionment is the

determination and assignment of the total expected joint air effort by priority and/or percentage that should be devoted to the various air operations and/or to geographic areas for a given period of time. Apportionment guidance lets supported commanders anticipate the level of air support. The apportionment decision may be daily or may remain in effect for a longer period of time, such as for a phase of the campaign.

The JFC, in coordination with the component commanders, decides apportionment and provides guidance. This may take place in a variety of forums.

On the basis of the JFC's initial guidance and objectives, the JFACC determines air objectives and guidance. He articulates these to the air strategy cell and/or GAT cell in the JAOC. After deliberations with representatives of all components at the daily GAT meeting, the GAT cell furnishes the JFACC with a recommendation for air apportionment that will accomplish the JFC's objectives. Another product of the GAT meeting is the draft joint integrated prioritized target list (JIPTL). The JIPTL lists the highest priorities of each component. Broad guidance for developing the JIPTL maybe provided by the JTCB, if one is formed. After consultation with the other components, the JFACC presents the apportionment recommendation to the JFC. The JFC will make the final decision.

Note: The exact procedures and terminology may vary slightly between theaters. Each theater tailors operations to suit the environment.

The BCD commander's input during GAT meetings is based on the COMARFOR's intent and concept of operations, and prioritized target nomination list. The BCD representatives go to the meeting with a full understanding of the priority, desired effect, and rationale for each nominated target to justify inclusion in the JIPTL. The following actions may take place at this meeting:

- Consider recommending changes to key targets.
- Develop and recommend updates to the joint target list (JTL).
- Assess joint air capabilities for future operations to meet JFC objectives and component nominations.

At this meeting the BCD commander or his representative clarifies the COMARFOR's air support requirements. He will explain the justification for the priority of each target.

Apportionment Timelines

For planning purposes, the JFC's initial guidance for the apportionment recommendation may address a period 96 or more hours into the future. The figure on page 3-5 illustrates a notional integrated air-ground operations planning process. However, the JFC's final apportionment decision for a specific ATO is normally made after requests for air support have been passed from the COMARFOR to the BCD.

Proactive consideration of factors bearing on future operations is key to synchronizing and sustaining maneuver, fires, and interdiction. This consideration begins as soon as practical. General guidelines regarding time frames for commanders initiating planning considerations and establishing initial guidance vary with the level of command. As a general rule the following apply:

- Ninety-six hours or more at EAC
- Seventy-two hours at corps.
- Forty-eight hours at division.
- Twenty-four hours at brigade.

Early planning permits COMARFOR identification of high-value targets (HVTs) associated with various courses of action (COAs) and subsequent coordination to refine and validate targets for nomination during the air tasking cycle and notional 48 hour joint ATO time line. Early planning also eases parallel planning and input from subordinate commanders as shown in the figure on page 3-5.

The figure represents a notional process. The time lines represented are not prescriptive. Approaching the

twenty-fret century, commanders and planners should not be tied to a 96 hour planning and 48 hour execution cycle. Systems of shared databases, common picture and information age technology will speed up the process. The emerging technologies permit commanders to emphasize Army operational tenets of **agility and flexibility** in planning, coordinating, and executing air and ground operations.

The COMARFOR considerations to support the planning normally address a period 96 or more hours into the future. The process of nominating targets during this 96 hour planning and coordination window is supported by the apportionment process. Target nominations may be confirmed 24 hours before execution of the ATO. Minor changes to target nominations may be made within the 24 hour ATO development cycle, or during execution of the ATO. The planning windows ensure perceived target requirements are based on projected enemy capabilities and actions. This highlights the importance of operational level IPB and joint war gaming to support ARFOR requirement forecasts.

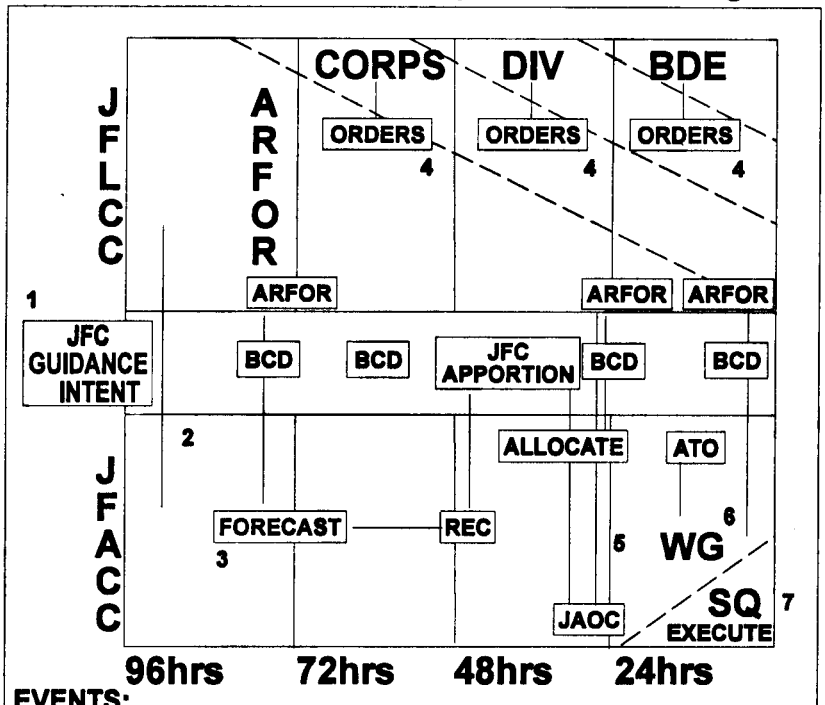
Allocation Process

During allocation, component commander's give common use sorties to the JFC for JFACC tasking. This determines sortie availability for the tasking period. Allocation is done through exchange of air allocation request (ALLOREQ) messages. The messages address the following three areas:

- Service component planning for their organic support missions and internal requirements as a result of the JFC's apportionment decision.
- Sorties not needed by the service component and available to the JFC for common use tasking by the JFACC.
- Requests for additional air support beyond the capability of the service components.

The JFACC's tool for planning and executing air requirements is the ATO. The BCD is an integral part of the planning, coordinating, and executing the ATO in support of ARFOR operations.

Notional Integrated Air-Ground Operations Planning Process



EVENTS:
1. Guidance from the JFC includes his intent for combat air.
2. The JFLCC provides the JFACC his component target requests and articulates their priority based on the ground scheme of maneuver.
3. The JFACC provides the JFLCC a forecast of available air support for planning purposes & provides the JFC an apportionment recommendation.
4. Orders are given which include the concept for use of available air as part of the commander's concept for firesand air interdiction.
5. The JFLCC provides detailed target information thru the BCD for target development and input to the ATO, if appropriate.
6. The JFLCC validates his ATO targets thru the BCD.
7. JFACC wings and squadrons execute the joint ATO.

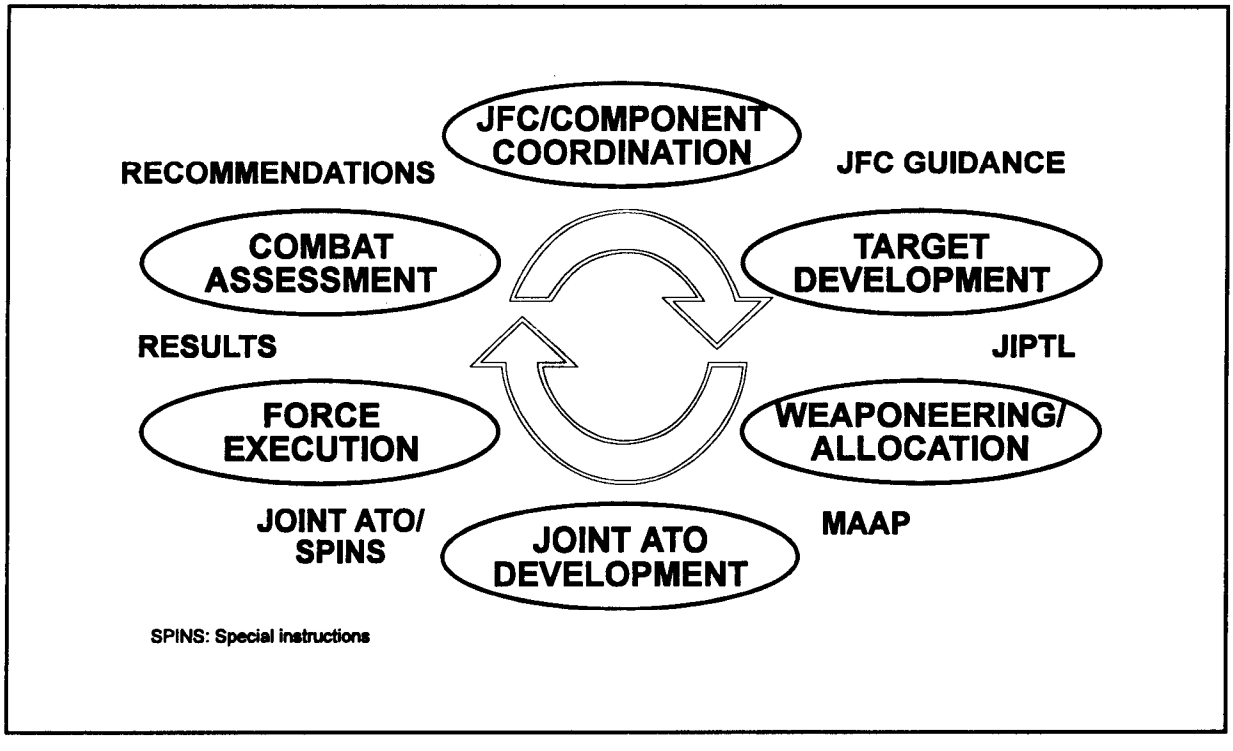
Joint Air Tasking Cycle

The JFACC uses a joint air tasking cycle to produce an ATO that will give efficient and effective use of joint air capabilities and forces assigned by the JFC. To meet both the apportionment guidance of the JFC and component air support requirements by joint air sorties the cycle provides a repetitive process for the following:

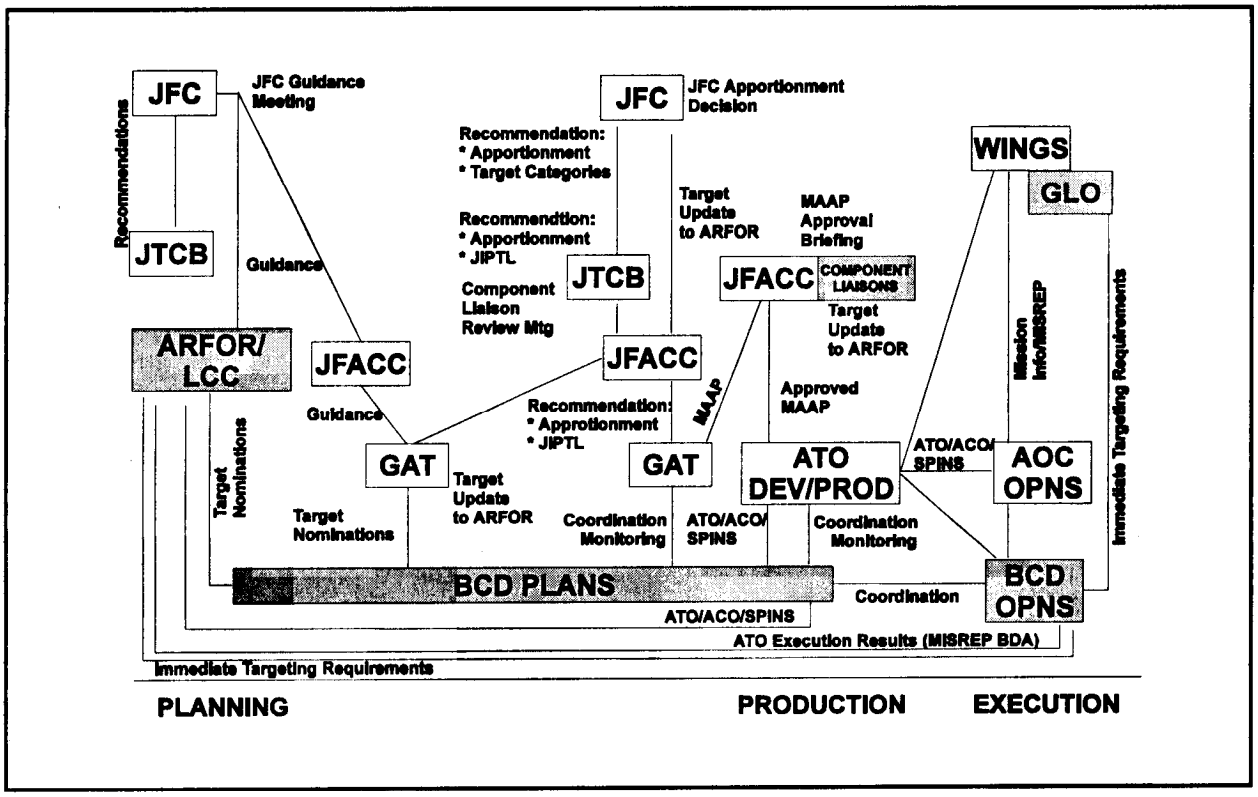
- Planning.
- Coordination.
- Allocation.
- Tasking.

Much of the day-to-day joint air tasking cycle is conducted through a series of information exchanges by designated component coordination elements (such as the BCD). The exchanges provide a means of requesting and scheduling joint air missions. The figure below illustrates the tasking cycle. BCD activity during the air tasking cycle is reflected by the figure on the next page. The figure reflects a notional process for development of the ATO including integration of COMARFOR targets.

NOTIONAL AIR TASKING CYCLE



BCD SUPPORT OF JOINT TARGETING DURING THE NOTIONAL ATO CYCLE

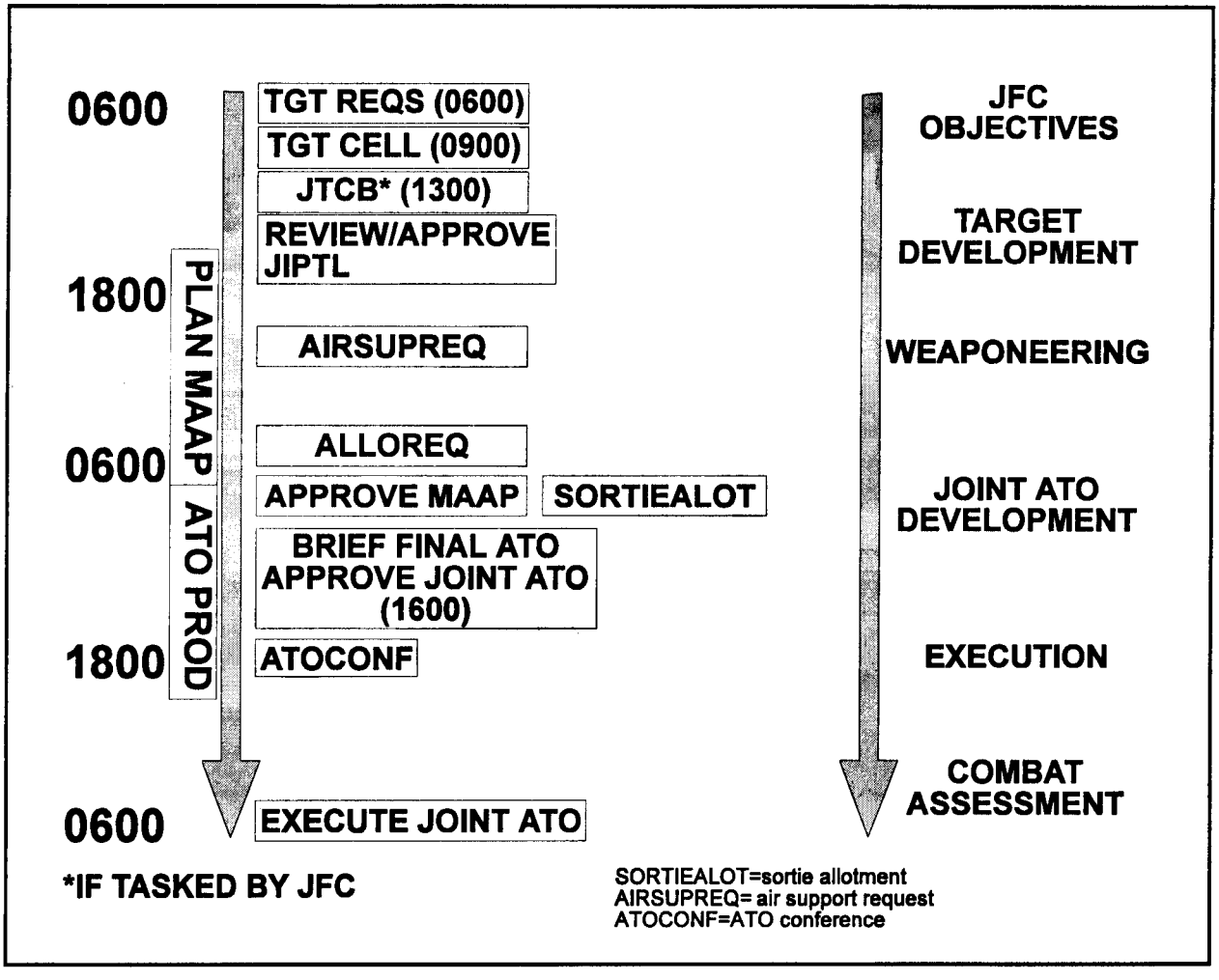


There are usually three joint ATOs at any time:

- The joint ATO in execution (the plan for today).
- The joint ATO in production (the plan for tomorrow).
- The joint ATO in planning (the plan for the following day).

The figure on the next page illustrates the concept.

NOTIONAL 48-HOUR JOINT ATO TIMELINE



Joint ATO Phases

The number of ATO phases may vary based on theater and contingency needs. The following discussion reflects the cycle in the figure on page 3-6 and is based on the ATO phases described in JP 3-56.1. The figure on page 3-7 reflects the application of joint targeting considerations during the notional air tasking cycle.

Phase l-JFC-Component Coordination

The JFC consults, normally daily, with his component commanders to do the following:

- Assess the results of the war fighting effort.
- Discuss the strategic direction and future operation plans.

This gives component commanders an opportunity to introduce recommendations, support requirements, and state their ability to support other components. The JFC gives broad guidance and objectives. The guidance includes the daily apportionment decision.

Phase 2-Target Development

The joint targeting process normally begins before forces are deployed or before the onset of hostilities. During the deliberate planning associated with an OPLAN at the CINC level, for example, a JTL may be constructed. This JTL is a database that contains the following:

- Prioritized target categories.
- Specific targets.
- Sufficient detail to help complete target identification, location, and assessment.

The JTL reflects the theater view of the threat. It is the start point for the JFC's targeting process focused on his AOR. As the JFC's concept of operations is developed, the JTL will be updated. During execution of the OPLAN, the JTL continues to serve as an updated reference.

The objectives and guidance received during phase one are used to focus target development. The BCD plans section processes the COMARFOR target nominations through the JAOC combat plans division, during phase one. COMARFOR target nominations maybe derived from the JTL data base, or maybe selected from the following:

- Intelligence.
- Reconnaissance.
- PSYOP.
- Surveillance inputs.
- Current intelligence assessments.
- Other information and considerations not known when the JTL was initially developed.

The COMARFOR target nominations are coordinated and incorporated with target nominations ***from*** the other components after they are deconflicted with other C^2W elements. The end product of the target development phase is a draft JIPLT, and a detailed air apportionment recommendation.

Phase 3-Weaponeering and Allocation

During this phase, targeting personnel quantify the expected results of lethal and nonlethal weapons use against prioritized targets. The draft JIPTL, from the target development phase, is the basis for weaponeering assessment activities. BCD personnel help the JAOC weaponeers identify the critical nodes of the COMARFOR targets that must be attacked to meet COMARFOR targeting objectives. After weaponeering, planners assign the appropriate assets to attack the targets. The final prioritized targets are incorporated into the MAAP. This MAAP is the plan of employment that forms the foundation of the ATO.

Phase 4 ATO Development

After the MAAP is approved by the JFACC, the JAOC combat plans division continues detailed preparations concerning the ATO, SPINS, and the ACO. The BCD plans section notifies the COMARFOR of any nominated targets which will not be included in the MAAP. Guidance from the JFC and JFACC, target worksheets, MAAP, and component requirements are used to finalize the ATO, SPINS, and ACO. The COMARFOR may submit critical changes to target nominations via the BCD during the final phase of ATO development. On the basis of the results of the MAAP, the COMARFOR may prioritize nominated targets not on the MAAP as alternates.

Phase 5-Force Execution

The JAOC directs the execution of and deconflicts all capabilities and forces made available for a given ATO. The JFC may give the JFACC the authority to redirect joint air operations. The JFACC **must** notify affected component commanders upon redirection of joint sorties that were allocated in the joint ATO to support them. The BCD operations section monitors the execution of the ATO. The section tracks all events relating to units performing assigned flying missions, and air defense of frendly forces. The BCD focuses on the defense of key facilities and locations. The BCD must continuously coordinate with the JAOC

operations division to update the status of COMARFOR priority targets. In addition, they must coordinate for unforeseen or changing requirements for COMARFOR air support and airspace control measures.

Phase 6-Combat Assessment (CA)

This phase compares mission results to the original objective guidance and commander's intent. Use of all available intelligence sources help in determining mission success or failure. In addition, a determination is made concerning the need for further operations against the same target. The BCD will monitor the aircrew MISREPs they receive from the GLOs and information from other intelligence sources at the JAOC during the execution period. The ARFOR will use the assessments of attack effectiveness to develop future targeting guidance.

Section II. BCD OPERATIONAL INTERESTS

General

At the same time the ATO is developed, the BCD ensures COMARFOR interests are met in other operational areas. These areas include the following:

- Deep operations.
- Air and missile defense.
- Airlift.
- Associated airspace command and control.
- Intelligence.
- Administration.
- Logistics.

Planning, coordination, and execution of operations in all these areas are eased by the DOCC and TMD cell (when formed).

BCD and the ARFOR Decision-Making Process

The COMARFOR and staff follow the military decision-making process described in FM 101-5 to develop operations plans and orders. The plans document command decisions, guidance, and intent for the application of assets to accomplish assigned missions. The BCD is not directly involved in this decision-making process. However, the BCD provides the input previously discussed which is key to plan development. The sections of the BCD communicate with the appropriate cells of the ARFOR TOC (army, corps, or division) to exchange information on the following:

- Operations.

BCD and ARFOR Deep Operations

The BCD evolved to provide coordination for the Army deep operations effort. Deep operations seek to attack the enemy beyond the immediate fight. The attacks shape the battlefield to support the COMARFOR intent for current and future operations.

Advancements in reconnaissance and surveillance, weapons, information and communications technology now permit the commander to find and target the enemy in all dimensions of the battle space. In tactical echelons, the primary weapons are the following:

- Artillery systems.
- Attack helicopters.
- CAS.
- SOFs.
- PSYOP.
- Maneuver forces.

However, the primary means for attacking deep targets are fixed- and rotary- winged air power, rocket, and missile artillery. This requires that the ground commander closely coordinate deep operations with the

JFACC. The BCD forms the link between the two agencies.

The primary links for the BCD are the following:

- ARFOR DOCC.
- TMD cell (when formed).
- ARFOR corps and below tire support elements (FSE).
- Headquarters with which the ARFOR directs contact in support of mission requirements (for example AD, FA, and attack helicopter headquarters).
- Supporting national and theater intelligence services.
- JFACC staff agencies internal and external to the JAOC (for example J-STARS crew, GLOs at AMC, ACC, and ABCCC units).

BCD and the ARFOR DOCC

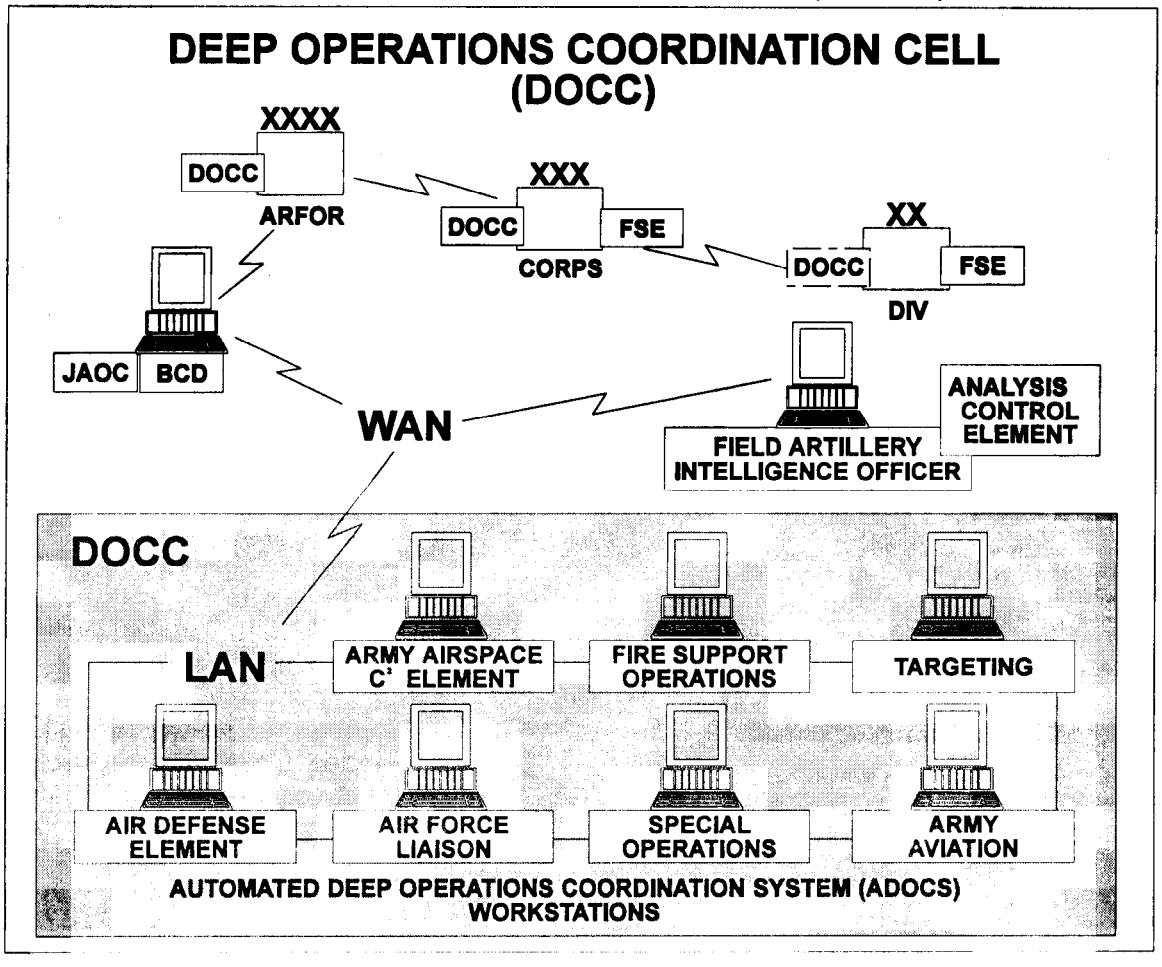
The figure on page 3-12 represents the BCD relationship to the DOCC for coordination of deep operations. The DOCC is resourced at corps but is developed 'ad hoc' at division level at the commander's discretion. The ASCC and corps DOCC is supported by the automated deep operations coordination system (ADOCS). The AFATDS replaces ADOCS functions as it is fielded.

The ADOCS is designed to automate and simplify the planning and execution process. The ADOCS also serves as an electronic link to the fire direction system (FDS). As ADOCS matures, it will also serve as a link to the maneuver control system (MCS) and the all source analysis system (ASAS). The ADOCS significantly speeds the coordination and staffing process and thus is ideal for processing and engaging targets with short dwell times. The ADOCS graphically displays numerous types of critical friendly and enemy battlefield geometry sets to include the following:

- Unit locations.
- Air corridors.
- Restricted fire areas.

The ADOCS operates on a local area network of work stations as shown in the figure on page 3-12. Configuration of work stations is a unit decision. Work effort is optimized on the basis of command and staff needs.

DEEP OPERATIONS COORDINATION CELL (DOCC) AND AUTOMATED DEEP OPERATIONS COORDINATION SYSTEM (ADOCS)



Airlift

USAF airlift provides rapid movement of cargo, passengers and equipment without regard to terrain restrictions. It also-makes possible resupply of critical items over extended distances. There are, however, limitations to the capabilities of airlift. These include the following:

- Weather conditions.
- Theater airfield availability and capacities.
- Aircraft availability.
- Weight and cube of material.
- Requirement for specialized crews and equipment.

Joint Pub 3-17 gives capstone guidance for planning, coordination, and execution of airlift. The daily airlift allocation depends on awareness of all legitimate requirements by JMC personnel. Once made, airlift

requests are handled through component logistic channels, with variations for the immediacy of the request.

Planned Requests

When air movement requirements are known or projected in advance, they are handled as planned requests. Planned request are processed through normal logistic channels. In all cases the JMC should task planned requests within the operational lead time established by the USAF component commander. Lead time is the time needed to source, task, and generate actual missions in support of a specific requirement. Lead time varies, depending on the scale of the request, available forces, and the theater air planning process.

Immediate Requests

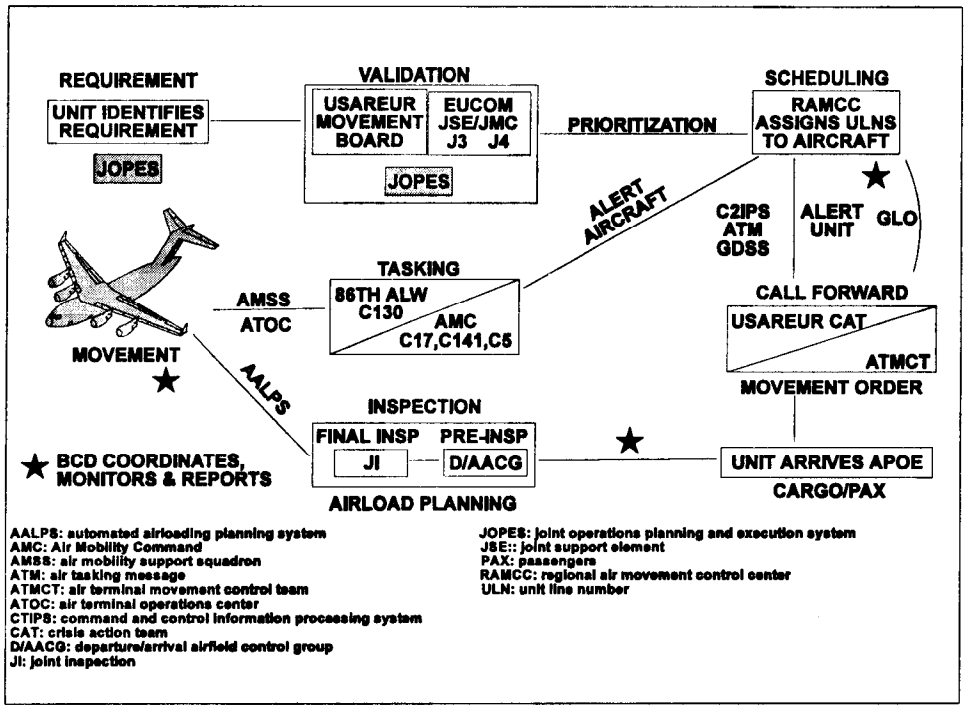
When air movement requirements are identified too late for normal ATO tasking cycle coordination, they are handled as immediate requests. Immediate requests are usually made to satisfy urgent employment, sustainment, or extraction requirements. Once identified at an appropriate level in a component, they are transmitted directly to the JAOC. The request is normally sent by a theater air liaison ofticer (TALO), through operational channels. This allows the JAOC to make preparations for the missions, while the actual request is staffed quickly through logistic channels. The theater airlift force is normally fully employed. The JMC may fill validated immediate requests by redirecting sorties supporting planned requests.

The primary operational responsibility of the BCD airlift section is to speed the processing of airlift requests in support of COMARFOR operations. The section must understand the request procedures and formats. The airlift role of the BCD varies from operation to operation. The BCD airlift section normally performs the following:

- Receives requests from the COMARFOR and coordinates them with the airlift coordination cell (ALCC).
- Ensures the airlift schedule is provided to the COMARFOR.
- Monitors air movement.

BCD airlift section personnel use the global decision support system (GDSS) and global transportation network (GTN) to monitor airflow. The figure on the next page depicts an airflow process and links to BCD for air deployment of Army forces.

USAREUR AIRLIFT PROCESS



USAF airlift and airdrop require much longer lead times to plan and coordinate than do Army combat service support (CSS) air movement operations because:

- Material and personnel must be moved to an airfield. This requires supplemental transportation and added coordination.
- Material and other air cargo must be palletized and/or rigged. Personnel must be marshaled and manifested. Load planning and an D/AACG may be needed.
- Request procedures inherently require longer lead times because the final validator is the JMC, not the Army. Large scale operations need advance planning to reallocate and relocate resources.

CHAPTER 4
COMMUNICATIONS AND AUTOMATION

The BCD must interoperate and communicate with Army, joint and other service organizations as an EAC unit located at the JAOC. The BCD requires communication and automation equipment that is compatible with these organizations. Joint and service communications networks provide secure voice, data, facsimile, and message trafffic communications linkage. All must be Army technical architecture (ATA) compliant. While this is an Army document, the joint aspects must comply with the joint technical architecture (JTA).

Section I. COMMUNICATIONS

External Communications

Priority must be given to theater communications systems to assure that targeting information is appropriately disseminated.

The GCCS provides the primary means of communications from the joint headquarters to the subordinate component commands. The system between the BCD and the ARFOR headquarters is established as part of the AGCCS. Secure facsimile should be used between the BCD and the ARFOR headquarters.

The ARFOR communications staff is responsible to ensure the BCD is adequately equipped with communications systems and integrated into the ARFOR communications nets. BCD automation systems use the communications links for exchange of digital information.

Internal Communications

Internal communications provide links between operator stations via local area networks (LANs) and to the external communication transmission systems. The BCD commander must coordinate the following:

- Access to the JAOC LAN.
- Access to JFACC automation systems.
- Linkage of BCD automation systems with the hosting JFACC staff.

Signal Support

The employment of automated systems by the BCD at the JAOC greatly increases the complexity of the signal support required. Signal soldiers are needed to support both the communications and automation and information processing systems assigned to the BCD. Signal specialists are assigned to the BCD to install, use, maintain, and troubleshoot communication equipment and terminal devices. The system specialist is responsible for the following:

- Integrate unit signal systems into the signal corps wide area network (WAN).
- Perform unit-level maintenance on authorized signal equipment and associated electronic devices.

Section II. AUTOMATION

General

Each of the sections in the BCD use automated information and C^2 systems to aid in their mission and to exchange of data and information with JAOC, joint service and Army automation systems. Maintenance, logistic support needs, and LAN and WAN system administration needs are also simplified.

To support the BCD missions a number of battlefield software applications are needed. The AGCCS replaces the STACCS as the primary automated C^2 system for EAC. This suite of automation equipment consists of common hardware and software and uses Department of Defense (DOD) COE.

The CTAPS is the Joint Chief of Staff (JCS) designated ATO generation and dissemination means. As AGCCS transitions into service, it will become the Army link with C^4I systems of other services. It will be able to access the ATO through CTAPS. This capability will simplify the exchange information on the following:

- Joint ATO.
- Airspace management.
- Intelligence.
- Air defense.

Work space availability may dictate that elements of the BCD be separated from their supporting AGCCS terminals. In which case access to CTAPS terminals for BCD personnel will be needed.

In addition to interface with CTAPS, as AGCCS matures, it will link with the Army tactical command and control system (ATCCS) and other components of the Army battle command system (ABCS) at corps echelon and below. The links let the BCD access, both internally and externally with the following:

- AFATDS.
- ASAS.
- $FAADC^3I$.
- Other systems and data bases as needed.

The AGCCS will include application modules which will link with the CTAPS database. The links will ease BCD synchronization and coordination. If the objective applications are not operative when the BCD deploys, then the BCD requires access to CTAPS work stations. USAF AOC, provided CTAPS will let the BCD receive information from JAOC elements for ATO and ACO synchronization and coordination. It will also Let the BCD pass the information to ATCCS systems. The BCD must be equipped with, or have access via AGCCS, to the following ATCCS systems:

- The ASAS work stations for updated information and intelligence summaries.
- The AFATDS to obtain and disseminate targeting and fire support information.
- The $FAADC^3I$ for access to air defense systems and sensors. It also gives ADA air space control information to the airspace management section for the conduct of airspace C^2
- Communications access to information from the ARFOR TOC tactical airspace integration system (TAM) to get full awareness of the air picture throughout the joint operations area (JOA) back to the power projection bases in the continental US.
- Access to the combat service support control system (CSSCS) to access CSS C^2 channels.

A BCD LAN links each of the automated systems and their software applications. Ideally, the systems should be fully interoperable and function as a coherent C^2 system to give coordinated joint air and land operations. An objective configuration for BCD automation system support is shown in the figure below. The objective capability shown in the figure gives the BCD access to key information. The ADA section is supported by digital linkage with the following:

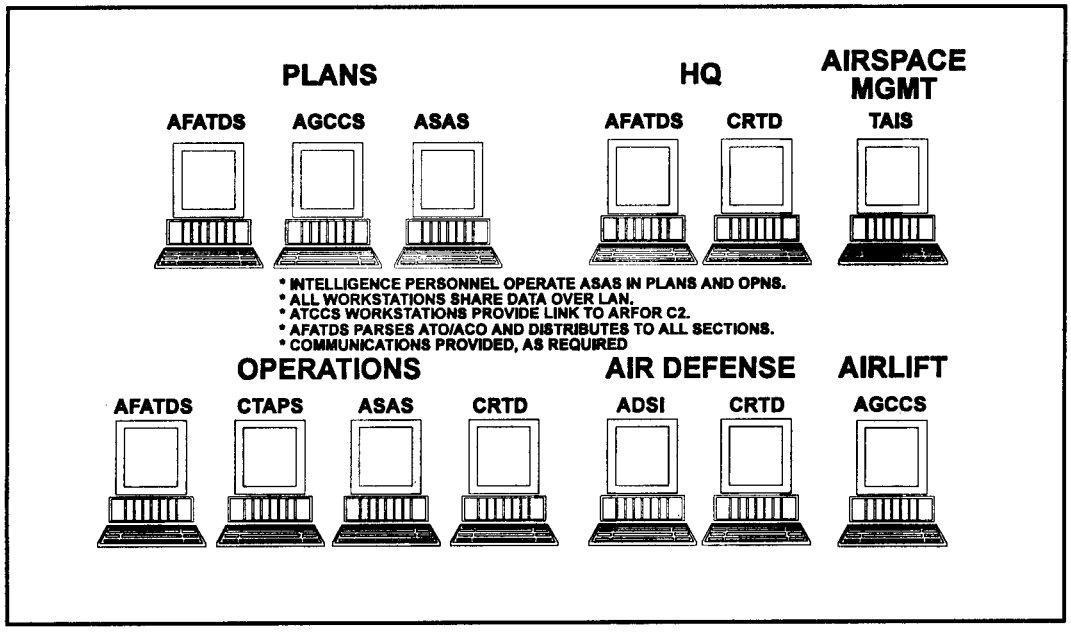
- ARFOR EAC ADA brigade TOC.
- ARFOR liaison officers (LOS) at the JFACC CRC.
- ARFOR Force Projection (FP) TOC (when formed).
- ARFOR G3 staff.

- Theater CINC TMD cell (when formed).
- Army TMD cell (when formed).

The links give the BCD access to the following:

- ARFOR ADA plans and priorities.
- ARFOR input to the ACM in the JFACC ACO.

DIGITIZED BCD OBJECTIVE CONFIGURATION



The airspace management section is supported by digital linking with the ARFOR aviation brigade TOC, and the ARFOR TOC A^2C^2 element. These links provide the BCD information on ARFOR plans and priorities for Army aviation and air defense.

The air defense section and airspace management section are supported by air defense system integrator ADSI, commander's real-time tactical display CRTD, and TAIS. The ADSI and CRTD link with the following systems:

- CINC TMD cell.
- ARFOR FP TOC
- EAC ADA brigade TOC.
- ARFOR staff elements.

The ADSI and TAIS link with the following systems:

- ARFOR aviation brigade TOC.
- ARFOR staff elements.

The BCD LAN links all BCD sections and allows for real-time data exchange.

The CRTD provides the BCD air defense planning tools. It provides the BCD commander a fused picture of the following:

- All "red and blue" units.
- Air situation.
- TMD situation.
- ADA situation.

- ADA situation.
- ACM.
- Battlefield geometry.

It gives data received to other BCD work stations over the LAN. The CRTD receives and displays the following:

- The current ARFOR air defense situation from the ADA brigade TOC.
- TBM launch data from the collocated ADSI.
- ARFOR air defense priorities from the ARFOR staff.
- Friendly ground situation from collocated MCS/P.
- Enemy ground situation from collocated ASAS.
- Joint force TMD capabilities (attack operations, active defense, and passive defense) from the ARFOR FP TOC.

The ADSI has the following capabilities:

- Receives the current air situation from the JAOC CRC.
- Allows direct receipt of air and intelligence data from all of the following:

  -Tactical data information link-Army (TADIL-A).

  -Tactical data information link-joint (TADIL-J).

  -Tactical information broadcast system (TIBS).

  -Tactical related applications (TRAP) receivers, if required.

- Isa link to USN and USMC tactical air support module (TASM), if required.
- Is an alternative link with the CTAPS for receipt of the ATO.
- Gives all data received to the CRTD over the LAN.

The digitized BCD communications options include the following:

- United States message text format (USMTF) over LAN and mobile subscriber equipment (MSE).
- The TIBS and tactical data display system (TDDS) over LAN and commander's tactical terminal (CTT).
- TADIL-A over high frequency (HF) and ultrahigh frequency (UHF) radio.
- TADIL-B over LAN, MSE, and secure telephone unit (STU).
- Tactical tire direction system (TACFIRE) [being replaced by AFATDS] over the single-channel ground and airborne radio systems (SINCGARS) and satellite communications system (SATCOM).
- Voice over SATCOM, HF, MSE, STU, and SINCGARS.
- Internal communications (INTERCOM) links organic to the BCD or provided by the host JAOC.

The BCD needs hard copy transmission via secure facsimile. Electronic mail services are supported by local software packages that meet the needs of the BCD through links to the communications network. The defense messaging system (DMS) will be used by the BCD as it becomes available. The capability to print and reproduce hard copy information is required at each BCD station location.

Information Systems Support

Dedicated automation and communication support is needed because of the number of automated platforms needed and the extensive links that must be supported and maintained. The BCD must be supported by signal soldiers. The signal personnel supervise, install, operate, and perform unit-level maintenance on multi-function and/or multi-user information processing systems, peripheral equipment, and associated devices. Information system operator-analysts perform analyst and system administrator functions, and construct, edit, and test computer system programs. In addition, operator-analysts will install, operate, strap, re-strap, and perform authorized maintenance on communications security (COMSEC) devices.

CHAPTER 5
BCD SUPPORT TO CONTINGENCY MISSIONS

The BCD organization** is **designed to support a mature theater of operations and to operate in fully deployed JAOC. The first chapters of this manual focused on how the BCD operates in that type of environment. However, when needed** the BCD is capable of deploying in tailored cells to satisfy a specfic contingency. This can occur in a range of **situations. For example, any of the following might call for a tailored BCD cell:

- *A NAVFOR or MARFOR commander is designated as the JFACC.*
- *When the ARFOR commander is a corps, division, or brigade commander.*
- *In a SAS0.*
- *Deployment under the direct control of the JFC when there is no designated JFACC.*

Contingency Operations

The BCD is key to synchronized contingency operations. Having a BCD in the JFACC JAOC during contingency operations is important because of the detailed coordination that must take place in a very short time span. In the multipolar post-cold war environment, contingency operations are increasingly common. They tend to be more the norm than the exception. They are often highly visible and politically sensitive. They are characterized by the "surgical" use of air assets and high level concern about the collateral damage effects of friendly air attacks. For these reasons, the JAOC expects detailed information about Army operations. The BCD must be prepared to provide this information in addition to supporting other doctrinal functions.

BCD Personnel for Contingency Support

There is no established manning for a BCD cell to support a contingency operation. Manning depends on the following:

- Size of the operation.
- Theater air control system (TACS) and Army air-ground system (AAGS) structuring
- Designation of the JFACC.
- Size of the JAOC function.
- Enemy strengths and capabilities.
- Extent of air support requirements.

However, the principal factor influencing the size of the BCD is the coordination and support needed by the ARFOR commander and his vision or concept of impending joint operations. Deployment constraints usually limit the size of the BCD cell deployed in the early stages of a contingency operation. BCD support to operation Just Cause in Panama is an example.

A HISTORICAL PERSPECTIVE

Initial planning called for a 12 man BCD to be deployed in three increments. A two man BCD team deployed as part of the XVIII Airborne Corps ADVON following the issue of the NCA execute order on D -2. The team included the senior plans officer who had long-term involvement in the planning and was to act as chief of the deployed cell. With him was an intelligence officer who had extensive BCD experience.

The second increment included four more personnel: an operations/airspace management officer, a plans NCO, an operations NCO, and an airlift officer. They deployed with the corps HQ on D-day.

These four, plus the two already deployed, made up the initial BCD cell. The first three soldiers deployed as scheduled on D-day. However, the airlift officer was "bumped" due to deployment constraints.

If needed, a third increment of six people was on standby to deploy after D-day. Only one, an airlift NCO, deployed, along with the "bumped" airlift officer, on D + 4. They handled the unforeseen theater airlift requirements. By D + 4, combat operations had stabilized and the deployed seven man BCD was adequate for the mission.

The minimum size of a deployed BCD cell should be twelve. Any fewer severely degrades the capability to sustain operations and provide expertise in all BCD functions. BCD support to operation Just Cause illustrates many considerations for planning BCD support in contingency operations. The contingency BCD must:

- Be prepared to perform all BCD functions without regard to the size of the cell.
- Deploy an initial BCD cell with the most experienced soldiers to cover all functions. They may be all that arrive or are needed.
- Stay involved with the ARFOR plans staff to ensure OPLANs include considerations for BCD deployment and support.
- Identify communications and automation needs as early in the planning process as possible.
- Establish deployment priorities. Airlift constraints increase the possibility of being bumped.

Airborne Warning and Control System

During contingency operations, procedures for passing information from USAF airborne C^2 platforms (for example, airborne warning and control system [AWACS] and ABCCC) to Army units can be eased by a BCD member flying with the platform.

Role of the ANGLICO

The air and naval gunfire liaison company (ANGLICO) is organized and equipped for the planning, requesting, and controlling of naval gunfire (naval surface fire support), artillery, and MAGTF CAS. The company can support allied and US forces, including US Army divisional units and their organic combat forces. The ANGLICO deploys teams to each level of command when Army units are engaged in amphibious or other operations supported by naval surface fire support and MAGTF aviation. It is composed of USN and Marine Corps air control and fire direction personnel, under

Marine Corps command. The personnel serve as liaison to supported Army and allied combat units.

The significance of the ANGLICO to the BCD is that ANGLICO teams collocate with the ARFOR FSE and G3 or S3 air ashore. The teams have direct communications to the sea-based USN JAOC, TACC and/or supporting arms coordination center (SACC) facility and to the Marine TACC and/or DASC, facilities ashore, once established. In joint operations, BCD cells will work in the sea-based USN JAOC, TACC and/or SACC and at the Marine TACC, DASC ashore at the terminal end of existing ANGLICO communications nets.

The relationship between the ANGLICO and BCD is mutually supporting and key. The ARFOR FSE (corps and below) processes preplanned and immediate air support requests for AI, CAS, EW, and tactical air reconnaissance (TAR) through the ANGLICO who uses a combination of hard copy and voice nets. The presence of the BCD at the TACC end of the nets ensures the following:

- Priority handling of each request.
- The ARFOR situation and needs are clearly stated.
- The USN or MAGTF commander's ability to support ARFOR request is assured by feedback through the ANGLICO.

Planning and Considerations

I When the BCD operates with the USN and Marine Corps some additional operational considerations from a planning and execution perspective exist. The BCD must do the following:

- Brief the following key personnel and agencies early on the role, mission, and function of the BCD:

  -ARFOR, TOC Staff.

  -Commander landing force (CLF).

  -Commander amphibious task force (CATF) and staff.

  -Tactical air control squadron (TACRON).

  -ANGLICO.

  -Sea-based ARFOR LOS.

- Ensure all components agree to use the Army request numbering system for commonality across all air component services. The use is specified in accordance with (IAW) USMTF AIRSUPREQ format and the JFACC OPLAN.
- Ensure all ARFOR preplanned air operations in the amphibious operations area (AOA) are given to the USN helicopter coordination section (HCS) or Marine direct air support center (DASC) in time to be added to the daily joint ATO.
- Ensure all deployed BCD sections are appropriately listed in the joint signal operating instructions (JSOI).
- If there is no JSOI, ensure all BCD sections deploy with necessary ARFOR and ANGLICO communication-electronics standing instructions (CESI) and BCD entries into the nets are made early.
- Activate or request activation of the inter-theater (COMSEC) package (ICP) to insure communications.
- Establish a plain address (PLAD) or route indicator (RI) for all hard copy message traffic routing as soon as a joint operation or exercise appears imminent. Several may be needed to establish hard copy communications to BCD teams at multiple locations. Ensure these are

provided to the J6 for listing in address indicator groups (AIG) as needed.

- Establish communications and automation support links with the ARFOR ANGLICO to pass USMTF messages as follows:

  -Situation report (SITREP).

  -Intelligence summary (lNTSUM).

  -Daily intelligence summary (DISUM).

  -Support geometry (SPRT.GEOM).

  -Orders.

  -Plans and orders changes (PLANORDCHNG).

  -Designated area (DESIGAREA).

  -AIRSUPREQ.

- Coordinate use of the joint supporting arms coordination (JSAC) voice net as voice backup by using USMTF voice templates with the ARFOR information manager, G3 or S3, FSE, and ANGLICO.

- Coordinate for an ARFOR signal officer to augment the BCD team with an operational control (OPCON) relationship to work inside the communications center of the ship. He will help troubleshoot all ship to shore communications nets. The officer should be required to attend the USN and USAF formal training recommended in Appendix C.

- Coordinate installation and testing of all ARFOR communications systems with associated COMSEC materials to ensure compatibility with the USN ship communications as early as possible.

- Ensure all BCD sections have copies of ARFOR operations checklists to monitor ARFOR progress.

- Ensure two BCD personnel stay with the sea-based USN JAOC TACC in case control of air operations is transferred from shore back to the ship.

- Coordinate all BCD transportation needs with the HCS and DASC.

- Ensure access rosters are prepared and provided to all USN and/or Marine Corps agencies that have restricted access before the operation begins.

- Coordinate the storage of classified material aboard ship with USN or Marine Corps security managers.

- Coordinate the details of who posts which maps with the ARFOR situation in the USN JAOC TACC and/or SACC or the Marine TACC and/or DASC. Press to have BCD review of and input on all situation maps (SITMAPS) in the facilities.

- Coordinate any special logistics such as the following:

  -Field gear for operations ashore.

  -Nuclear, biological, and chemical (NBC) defensive equipment.

  -Weapons and ammunition compatibility.

  -Equipment storage and access.

  -Armory procedures.

ANNEX A
BCD RELATIONSHIP TO THE USAF

Normally, the commander of a numbered air force (NAF) is designated as the Air Force forces (AFFOR) commander, and as the JFACC. In this case, the AFFOR AOC hosts the JAOC. The USAF AOC is the senior agency of the TACS. It is task organized to provide centralized planning and control and to ease decentralized execution of air and air defense operations. The JAOC develops and executes the ATO. If the JFACC is also designated the ACA, his JAOC develops the ACO.

USAF Air Operations Center as JAOC

The USAF AOC is the operational facility in which the commander of Air Force forces (COMAFFOR) or JFACC, when so designated by the JFC, has centralized the planning, direction, and control over committed air assets. The JAOC works at the component or force level, and gives the COMAFFOR and/or JFACC with the following:

- Supervises the activities of assigned or attached forces.
- Monitors the actions of enemy and friendly forces.
- Control joint and combined force air assets.

The deployed JAOC integrates equipment and cadre personnel from the staff of the numbered air force (NAF) and component organizations. JAOC manning is based on a cadre concept with personnel picked for their battle management expertise and knowledge of C* concepts and procedures. The cadre personnel are augmented by personnel who are specialists knowledgeable in the current capabilities, tactics, and procedures of each of the C^4I systems, weapons platforms, or service-unique functions in use.

USAF JAOC Functions

The USAF JAOC can be tailored to do a variety of missions and management functions. In any case, the JAOC performs the following three basic management functions:

- Flight management. The flight management function consists of two parts. First, air operations planning culminating in the production of an ATO. Secondly, monitoring and tracking the progress of tasked missions to include relaying any changes or deviations to affected control agencies or flying units.
- Battle management. The battle management function of the JAOC is defined as the decisions and actions taken in direct response to the presence or activities of enemy forces. The battle management function is the most critical activity in the JAOC. It may decide the success or failure of the theater forces to achieve their assigned objectives.
- Systems management. Systems management focuses on communications. It is the building and maintaining of links between all elements of the TACS. Airspace management and communications management are normally considered subsets of the function. The major concern of the AOC in this area is the exchange of C^2 information, such as the following:

  -ATO.

  -Orders of battle.

  -Scrambles.

-Threat alerts.

-Air logistical status.

USAF JAOC Organization

JAOC organization may vary among NAFs. All JAOC are made up of six staff elements responsible for the following:

- Operations.
- Plans.
- Intelligence.
- Logistics.
- Communications-electronics.
- CSS.

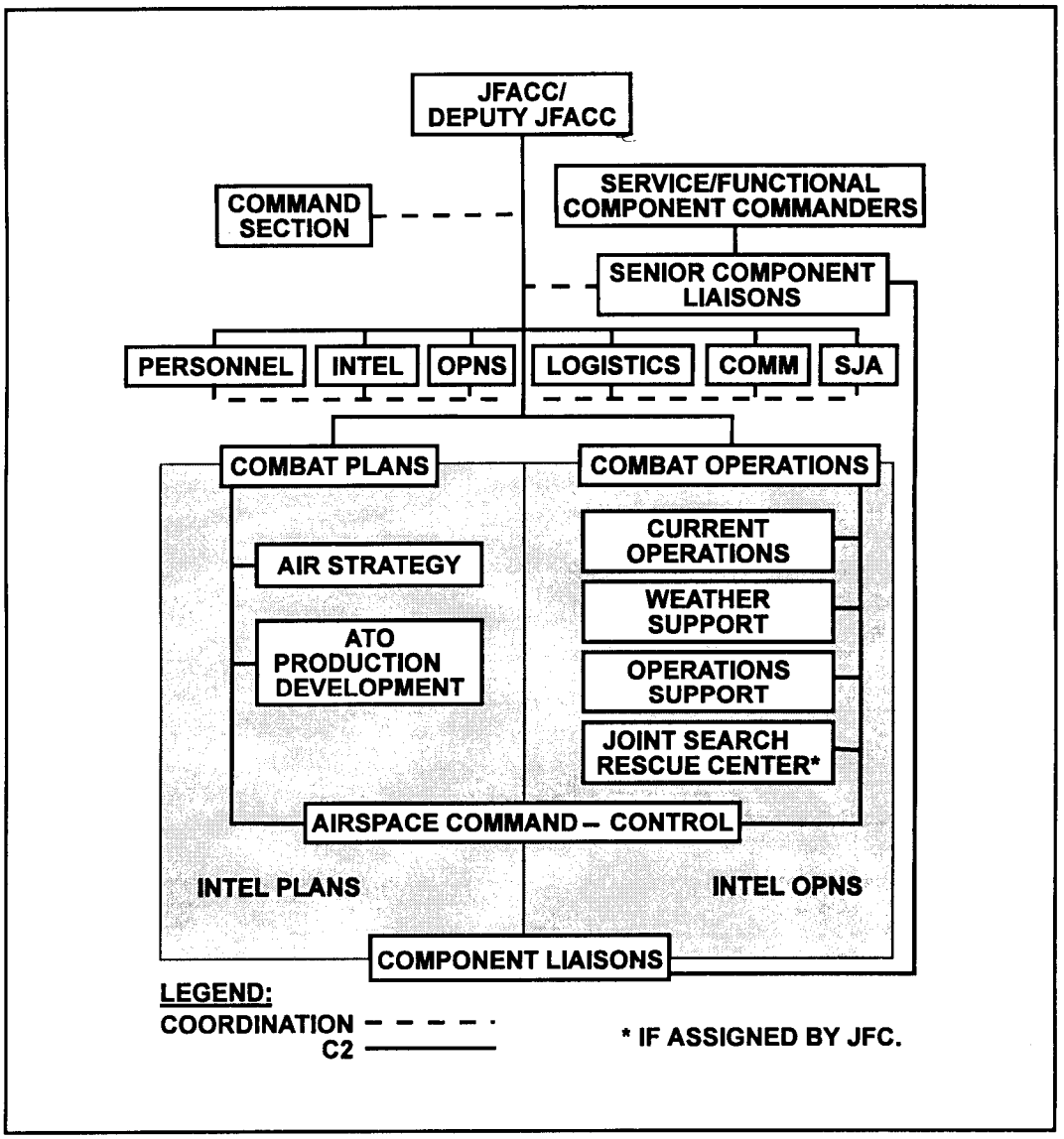
The size of JAOC depends on the size of the forces (land, sea, and air) involved and the C^2 needed. During a contingency operation, the USAF component could range in size from a single squadron to numerous wings.

Initially, the JAOC may have only two tasks as follows:

- Guide the arrival and positioning of air resources.
- Prepare the plans and agreements needed for their continued support and operations.

The size of the JAOC may vary. It could begin as a limited capability represented in the small quick response package (QRP). Later a more robust limited response package (LRP) may evolve. And finally, a fully operational theater response package (TRP) capable of a Desert Storm level of effort may develop. Whatever the size of the force involved, the necessity for the COMAFFOR and/or JFACC to have one central system to exercise control over his forces remains the same. The figure on page A-3 represents a notional USAF JFACC structure providing a JAOC.

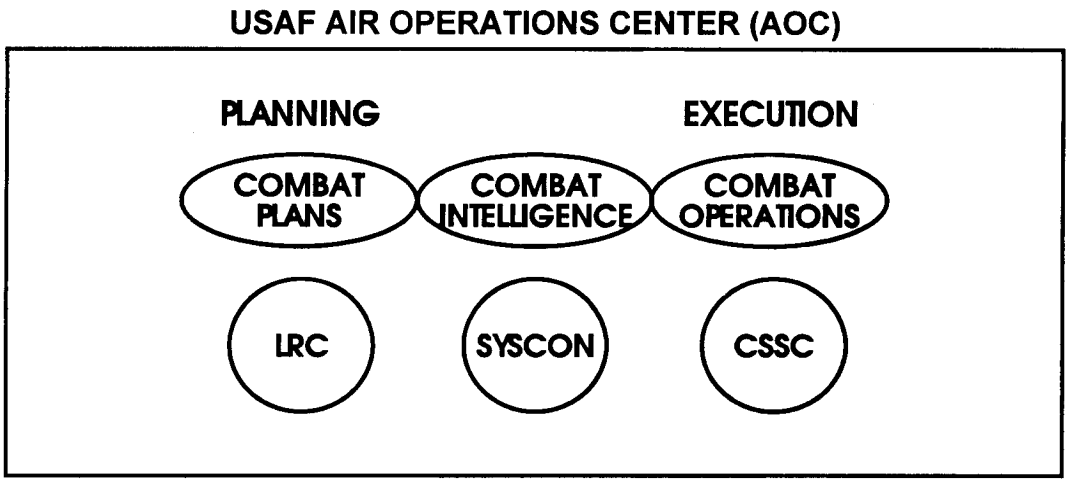
NOTIONAL JFACC ORGANIZATION (JAOC)



When constituted, a typical JAOC consists of a JAOC director and based on the USAF AOC structure the following six elements:

- Combat plans division (CPD).
- Combat operations division (COD).
- CID.
- SYSCON.
- LRC.
- CSSC

The figure on the next page illustrates the makeup of the organization.



In addition, a DIRMOBFOR may be assigned to the JFACC staff as a liaison from AMC. Otherwise the the theater ACC may appoint a DIRMOBFOR. The DIRMOBFOR maybe authorized direct coordination with the ALCC of the JAOC for airlift matters, even though the ALCC maybe external to the JAOC.

JAOC Director

The JAOC director (typically the director of operations of the USAF component) is responsible for the centralized planning, directing, controlling, and coordination of air assets and theater wide-area surface-to-air missiles (SAMS) assets available to the JFACC. The director is responsible to the COMAFFOR. who may be the JFACC, for tasking all assigned air operations.

Combat Plans Division

The CPD is responsible for the air operations planning of the JAOC. The CPD is typically divided into the following elements:

- Air campaign branch (ACB).
- Joint guidance, apportionment, and targeting cell.
- ATO branch (ATOB).
- Airspace control branch.
- Plans intelligence branch.

The CPD performs the following:

- Develops air strategy.
- Makes apportionment and allocation recommendations.
- Produces the ATO and related documents to include the following;

  -ACOs.

  -Target nomination list (TNL).

  -Tactical operations data (TACOPDAT).

  -Operational tasking data link (OPTASKLINK) messages.

Combat Operations Division

The COD is responsible for execution of the current ATO. The COD is typically divided into the following branches:

- Offensive operations (OOB).
- Defensive operations (DOB).
- Airspace control.
- Weather support (WSB).
- Operations intelligence.

The COD may also include a rescue coordination center (RCC) which supports or could be designated as the joint search and rescue center (JSRC).

Combat Intelligence Division

CID directs the activities of the following:

- Plans intelligence.
- Operations intelligence.
- Intelligence support.

Plans intelligence and operations intelligence are physically and fictionally integrated with the CPD and COD, respectively. To Support JAOC requirements, the CID coordinates requests for support from the following:

- Air intelligence agency.
- Air Force information warfare center (AFIWC).
- The major command (MAJCOM) to which the CID is assigned.
- Combatant (unified) command intelligence assets

Systems Control Center

The SYSCON center directs the use and linking of USAF communications-computer systems (C-CS) elements in the theater of operations. The SYSCON center may also be responsible for the joint network of the theater. The SYSCON center consists of the following branches:

- Site management.
- Operations control.
- System administration (SYSAD).
- Deployed systems support.
- Total risk assessment cost estimate (TRACE) team/engineering.

Logistics Readiness Center

The LRC is the focal point for all air related logistics issues in a theater of operations. It is responsible for the centralized direction and control of the deployment, reception, and redeployment of the logistics assets and the execution of logistics fictions. The LRC also supervises logistics actions related to the following:

- Mobility.
- Operations.
- Aircraft serviceability.
- Munitions.
- Aerospace ground equipment.
- Readiness spares packages.
- Petroleum, oil and lubricants (POL).

The LRC consists of the following branches:

- Logistics plans.
- Aircraft maintenance.
- Supply and fuels.
- Transportation.
- Contracting.

Combat Service Support Center

The CSSC is responsible for theater "bed down" support fictions. The CSSC consists of the following branches:

- Engineering.
- Personnel.
- Services.
- Security Police.
- Medical.
- Information management.

Airlift Coordination Cell

The ALCC is normally collocated with the AOC The ALCC does detailed planning, coordinating and tasking for theater assigned air mobility forces. If not collocated, the DIRMOBFOR acts as the liaison from the AMC for ALCC matters.

The ALCC functions include the following:

- Gives centralized control of theater assigned air mobility forces (tanker and airlift).
- Develops the airlift part of ATO and the airlift mission schedule.
- Coordinates, directs and commits assets to preplanned and immediate airlift needs.
- Gives guidance to the joint force commander's agent (JFCA) on available airlift assets.
- Disapproves requests when no airlift assets are available.
- Receives advance notification of immediate airlift requests from the TALO.

The ALCC major divisions the areas follows:

- Airlift operations. On the basis of validated airlift request, plans the airlift mission schedule and airlift portion of the ATO.
- Tanker operations. Aerial refueling experts in combat plans to coordinate tanker support for the combat air force (CAF).
- C^2. Monitors the execution of airlift and tanker operations.
- Combat operations. Monitors the status of airfields, drop, landing, and extraction zones. Personnel in combat operations give briefings to recommended tactics.

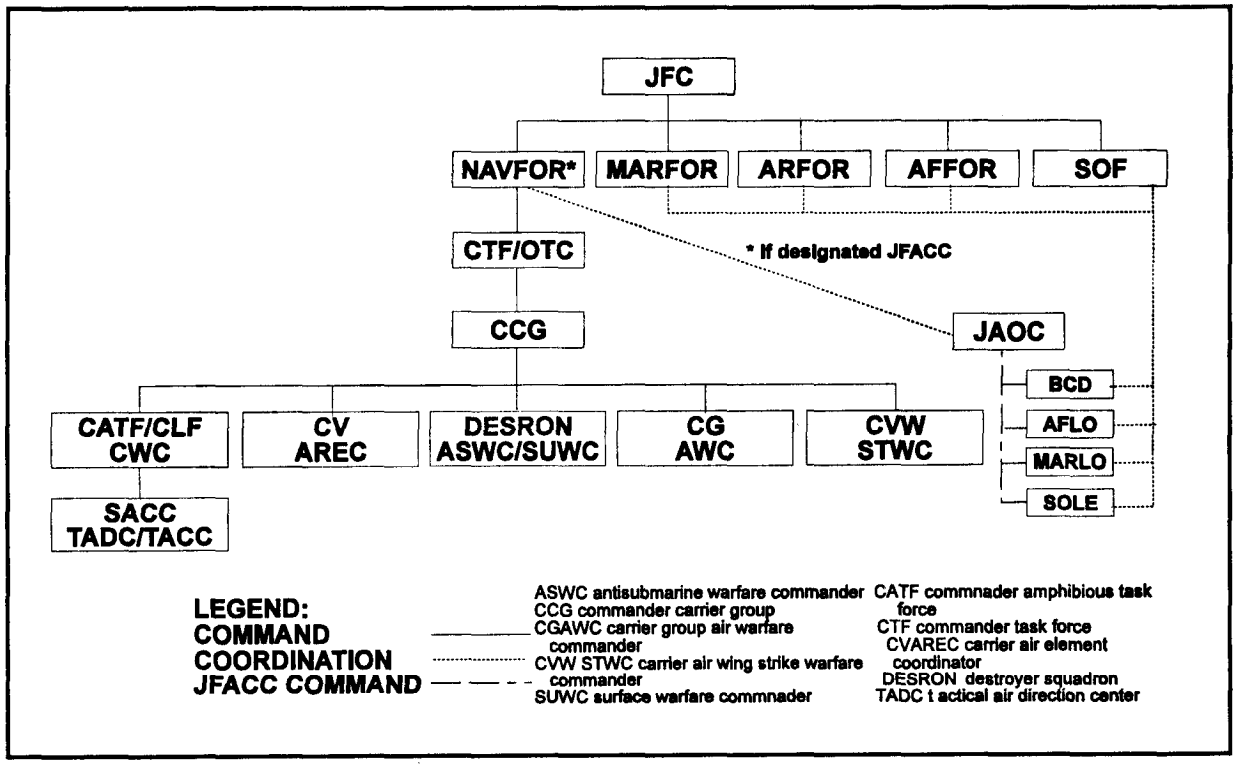
APPENDIX B
BCD RELATIONSHIP TO THE NAVFOR AND MARFOR

Currently, if the JFC designates the NAVFOR Commander as the JFACC, he will conduct operations on either an LCC (command and control platform) or on an aircraft carrier, depending on which is in the theater. The LCC has more capability in terms of communication equipment, but it is more likely that a carrier will be on the scene.

When assuming duty as the JFACC, the NAVFOR commander or commander carrier group (COMCARGRU) forms a JFACC staff and begins operations. Initially, most of the JFACC staff will consist of USN personnel with liaisons fiom the other components and augmentees flown in as needed.

The functions of the Navy JFACC are organized and standard. The aircrafi carrier or the LCC has a JAOC. The A TO is developed according to joint procedures and guidace fiom the JFC. Due largely to the constricted berthing space available on USN ships, the staff of a sea-based JFACC will normally be smaller than a land-based JFACC. The difference in staff size has an effect on the joint air planning capacity that a sea-based JFACC can handle. The organization and procedures associated with a sea-based JFACC do not differ signlficant[y fiom a [and-based JFACC. The fimctions are the same. The differences between the two are more often a factor of scale of the operation than with the procedures inherent in both. A notional sea-based JFACC structure is shown in the figure below.

SEA-BASED JFACC ORGANIZATION



Navy Tactical Air Control Center

The USN TACC is the senior agency of the Navy tactical air control system (NTACS). The sea-based USN TACC is the primary air control agency from which all air operations are controlled. This includes support of amphibious operations when air control and airspace management are sea-based. It is the USN functional equivalent of the USAF JAOC and USMC TACC. Like the USAF AOC, it can be augmented and tailored to form a JAOC.

The USN TACC controls air support and air warfare forces in the AOA, when established, until control of the operations is passed to the CLF. The USN TACC is operated by a tactical air control squadron (TACRON). A TACRON is organized to man all of the offensive air systems and a portion of the air defense systems of the USN TACC.

The tactical air controller (TAC) is the officer in charge of all operations of the USN TACC. He is responsible for the control of all aircraft and air warning facilities in the AOA. The TAC is responsible for the overall operation of the USN TACC. The USN TACC is divided into the following five sections:

- Air traffic control.
- Air support control.
- Helicopter coordination.
- Air warfare.
- Plans and support.

The figure on page B-4 depicts the organization of the USN TACC and the links to the BCD. Each section has defined responsibilities.

Air Support Control Section

The air support control section (ASCS) exercises operational control and coordination of all aircraft (offensive air) assigned to strike warfare or troop support missions. The air support coordinator advises the SACC of weapons loads, fuel status, and other data that will aid in mission assignment or coordination. The ASCS advises the supporting arms coordinator (SAC) on the following:

- Use of CAS aircraft.
- Evaluates and coordinates tactical air requests (TARs) received.
- Consolidates daily air support requirements.

Air Warfare Section

The air warfare section (AWS) is responsible for the evaluation of all air warning reports and the operational control of all air warfare assets. It does the following tasks:

- Issues threat warnings.
- Initiates and controls the assignment and engagement of air contacts by combat air patrol (CAP), guns, missiles, and electronic attack (EA).
- Designates anit-air warfare (AAW) sectors.

The AWS coordinates all air warfare operations in the AOA. The AWS acts as a link between the CATF and the air warfare commander (AWC). Actual control of AW assets usually remains with the AWC.

Air Traffic Control Section

The air traffic control section (ATCS) is responsible for the safe and speedy handling of ail aircraft operating in the AOA. It controls and coordinates all air traffic entering, operating in, or traversing the AOA. The section also coordinates search and rescue operations.

Helicopter Coordination Section

Transport helicopter operations are controlled by the helicopter direction centers (HDCs) on aviation-capable amphibious ships. The helicopter coordination section provides oversight to all HDCS in the amphibious force. In the course of providing oversight the section does the following tasks:

- Coordinates all transport helicopter operations.
- Ensures requests for helicopter support are filled.
- Controls specific helicopter missions as required.

The HCS advises the TAC and SAC on the following:

- Use of transport helicopter assets.
- Requests for transport helicopter support from the landing force
- Assignment of missions to transport helicopter.
- Coordination of transport helicopter operations with the SACC.

Plans and Support Section

The task done by the plans and support section (PSS) are as follows:

- Conducts current and future planning.
- Assembles and distributes the daily air plan or ATO.
- Assembles reports.
- Provides all communications support.

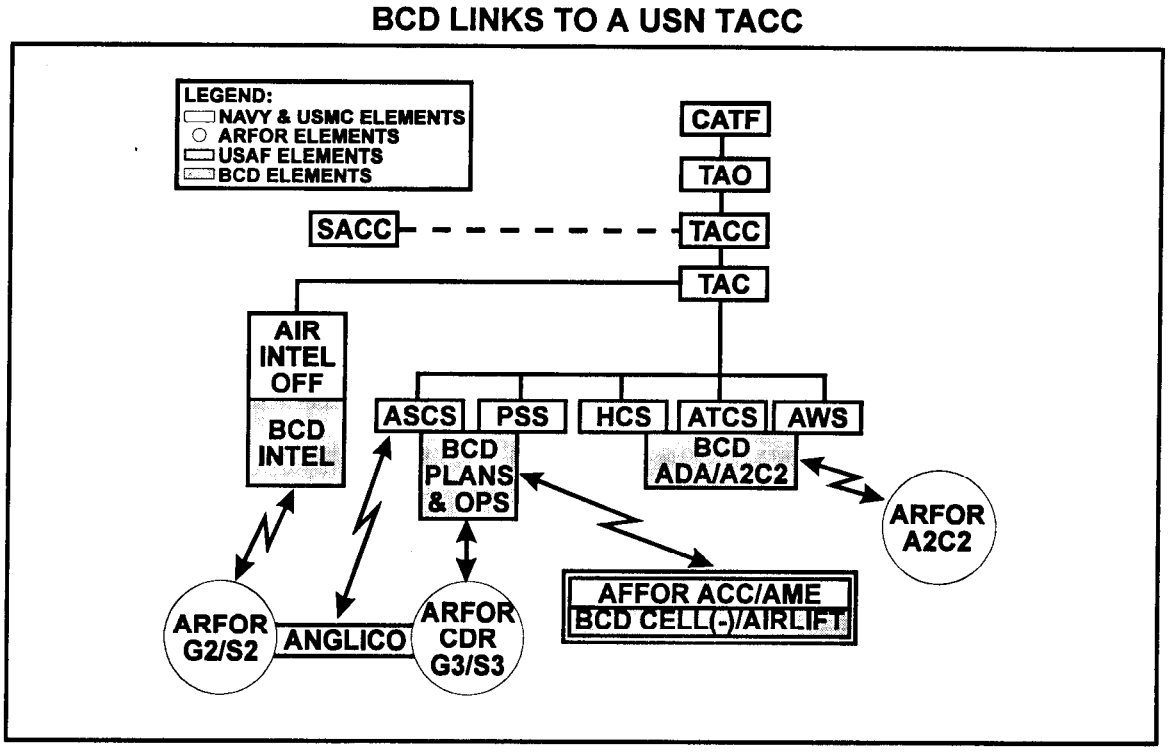
The PSS is responsible for the following:

- Current and future planning.
- Data collection and dissemination.
- USN TACC communications support.
- Supervision of communications personnel.
- Preparation and distribution of all air operations reports.

The PSS also processes ATO type products such as the daily helicopter and fixed-wing fragmentary orders for air operations.

Air Intelligence Officer

An air intelligence officer (AIO) is assigned to the SACC to the TAC by preparing the air target list and maintaining a current plot of enemy and friendly orders of battle. He coordinates with the ASCS on tactical air requests approved by the SAC for engagement by air assets and receives BDA reports to update current target lists.

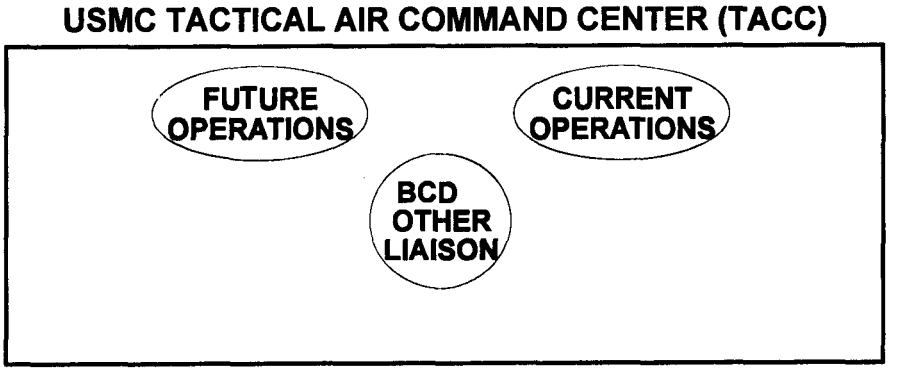


US Marine Corps Tactical Air Command

The USMC TACC is the senior air control agency in the Marine air command and control system (MACCS). It serves as the aviation combat element (ACE) commander's command post. The Marine TACC is the facility from which the ACE commander and the battle staff plan, supervise, coordinate, and execute all current and future MAGTF air operations. It is the fictional equivalent of the USAF JAOC and the USN TACC, and is the facility from which the BCD operates. The battle staff is divided into two sections. One handles current MAGTF operations while the other plans future operations.

A sea-based Marine TADC is established during amphibious operations and is the senior MACCS agency before the transfer of control ashore. The organization and capabilities normally mirror the Marine TACC and differ only in the scope of assigned tasks, size of responsible airspace, and location of control. Once the MAGTF assumes control of all air operations, the Marine TADC becomes the Marine TACC.

The Marine TACC consists of two sections. The future operations section develops and disseminates the ATO. The current operations section supervises the execution of the ATO and makes adjustments as dictated by the situation. The figure on the next page depicts the organization of the Marine TACC.



Integration of the BCD into the TACC

In many instances the USN or Marine Corps could be the JFACC and the primary provider of air power to Army forces. The USN uses an afloat tactical air control center (TACC) to manage air assets. The USN TACC is collocated the SACC aboard the amphibious task force (ATF) C^{3}1 ship.

The Marine Corps uses a tactical air command center (Marine TACC) to manage air assets. The USN TACC and Marine TACC manage air operations inside an AOA on behalf of the CATF and the CLF respectively. The BCD with a contingency mission must be ready to deploy with USN and/or Marine TACC support teams to give the same BCD functional area links as in a USAF AOC.

BCD Functional Area Links

The fictional area links of the BCD with individual USN TACC sections is depicted in the figure on page B-4. Workspace and communications support to the BCD must be specifically coordinated prior to all exercises or operations. Recommended BCD personnel manning for support to a USN or USMC TACC are listed in the table on the next page. Recommended BCD workspace locations when embarked aboard an LCC class ship such as the USS Mount Whitney are shown in the figure at the top of page B-7. Workspace locations when aboard an LHA class ship such as the USS Saipan are shown in the bottom figure.

Functions of the USN and Marine TACCS of concern to the BCD and ARFOR include:

- Maximize the use of all air assets available to the CATF and/or CLF.
- Give CAS and DAS, air reconnaissance, EW, and air assault support (primarily helicopter) to the CLF and all units under his command or control.

RECOMMENDED BCD MANNING TO SUPPORT A USN OR USMC TACC

A. Organic to the BCD:

	C^2 SHIP AAWC SHIP
COL BCD commander	1 (SACC)
LTC/MAJ chief/plans officer	1 (SACC)
MAJ/CPT operations officer	1 (SACC)
Plans/operations NCO	2 (SACC)
Intel NCO	1 (SACC)
ADA personnel (Note 1)	1
Airspace management (A^2C^2) personnel	1 (HCS)
Airlift personnel (Note 2)	1 (HCS)

B. Augmentees that may be placed OPCON to the BCD commander:

	C^2 SHIP CV (CARRIER)
CLO (carrier liaison officer)	1
Fire support officer	2 (ASC)
ARFOR LOs to CLF	2 (ASC)

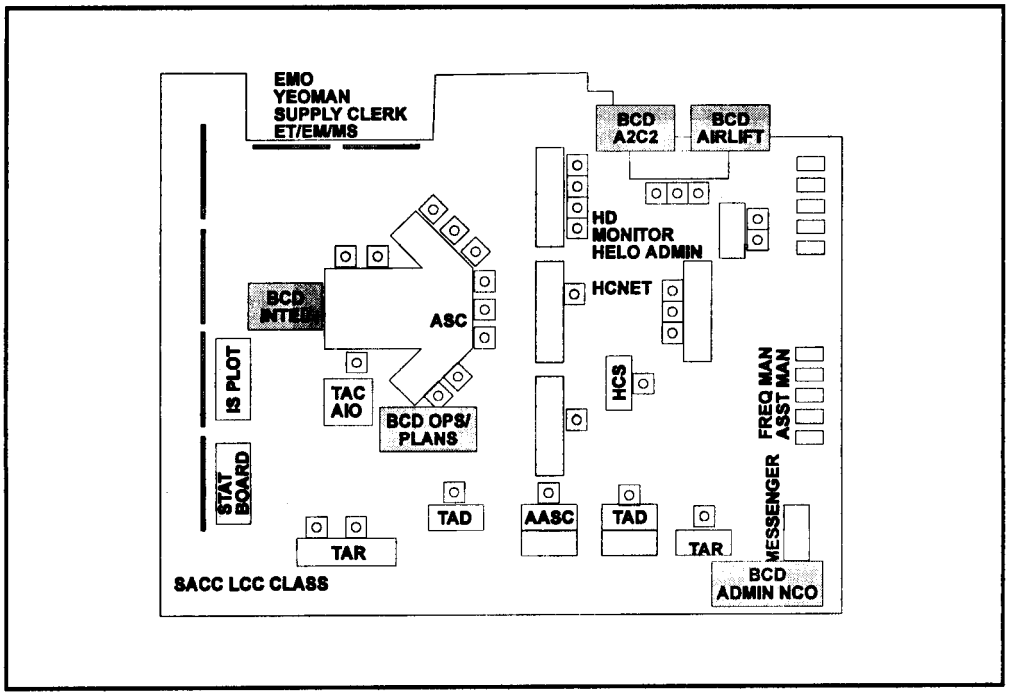
Notes:

1. Do not position ADA officers aboard unless it is expected the ARFOR will employ Hawk and/or Patriot and tie in with USN or USMC air defense systems.

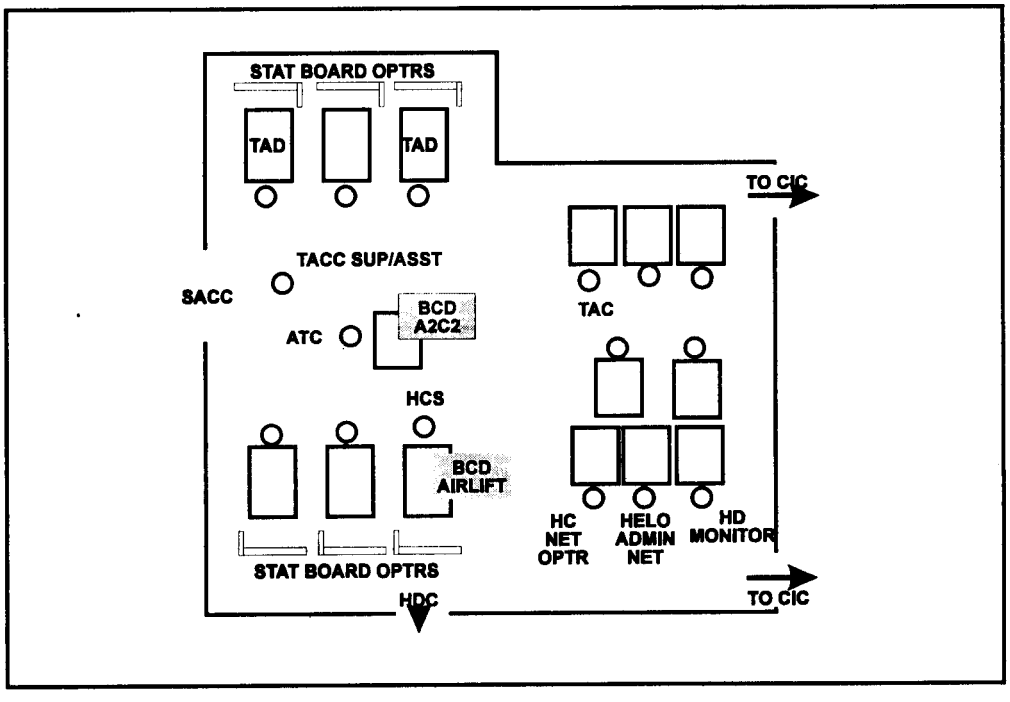
2. Needed here only if airlift support to the ARFOR is coming from the USN; otherwise, locate as necessary with the DTACC.

- Consolidate all air support requests and task available air assets as needed by publishing the ATO.
- Control all tactical and itinerant air traffic to deconflict airspace in the AOA.
- Coordinate all air defense operations in the AOA.

RECOMMENDED BCD WORKSPACE ON LCC CLASS SHIPS



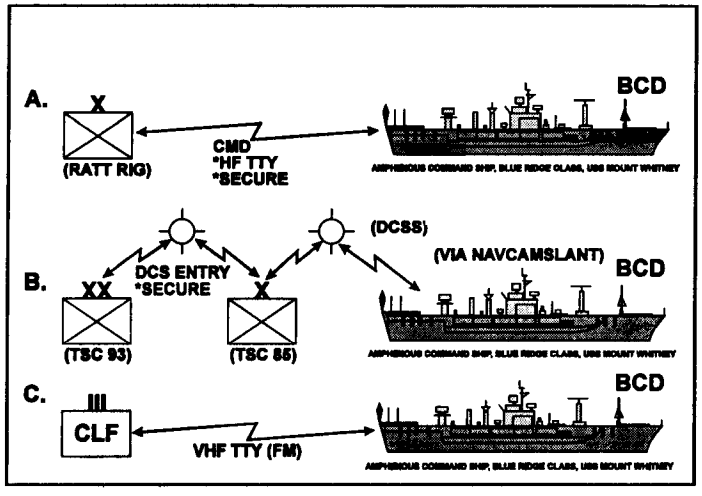
RECOMMENDED BCD WORKSPACE ON LHA CLASS SHIPS



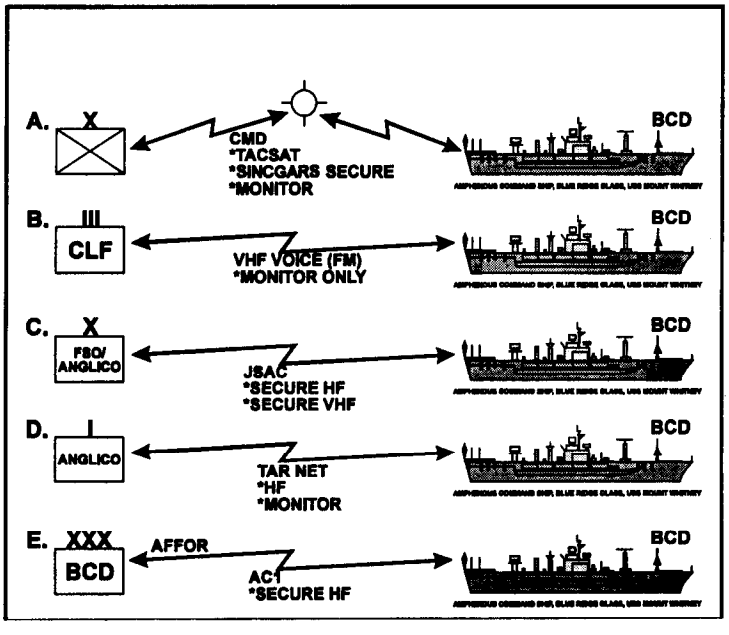
Sea-Based Communications

Teletype and voice nets the BCD can use to coordinate air-ground operations on behalf of the ARFOR while sea-based are shown in the two figures below. they are also designated in the classified joint CESI for each exercise or operation.

BCD (SEA-BASED) JOINT TELETYPE NETS



BCD (SEA-BASED) JOINT VOICE NETS



BCD Operations During Joint Amphibious Operations

The BCD links electronically with the following:

- Tactical air officer (TAO).
- TAC.
- SAC afloat.
- Marine TACC senior watch officer (SWO) ashore.

The BCD sections perform their normal functions with TACC personnel in the sections depicted in the figure on page B-3.

BCD to Marine TACC Links

"Phasing control ashore" is the process of passing the authority to command, control and coordinate certain combat functions from the CATF to the CLF. The phasing of control ashore process, as it applies to the MAGTF ACE, directly impacts on the functioning and responsibilities of various MACCS agencies.

The tactical air operations center (TAOC) is the primary air control agency of the MACCS. It is responsible for airspace control and management. It provides real-time surveillance and control of friendly aircraft. It provides navigational aid with respect to assigned airspace and direction. It performs real-time direction and control of air warfare operations involving aircraft and surface-to-air weapons. The TAOC collects and displays information obtained from TACC and other USMC sources. The TACC also uses information from other services and nations. The TAOC process the information for use in controlling assigned airspace and directing and controlling air defense assets. TAOC operations parallel those of the CRC normally associated with joint Army and USAF defensive air operations.

The Marine responsible for overall management of air defense assets within the Marine Corps AO or assigned sector is the Marine sector air warfare coordinator (SAWC). The SAWC typically collocates with the TAOC. By mutual agreement between the CATF and CLF, the CLF would assume control of landward sector AAW and exercise that control through the SAWC and TAOC.

The DASC is similar to the USAF ASOC normally found in a corps tactical operations center (CTOC). The DASC is the primary MACCS agency responsible for the direction of air operations supporting ground forces.

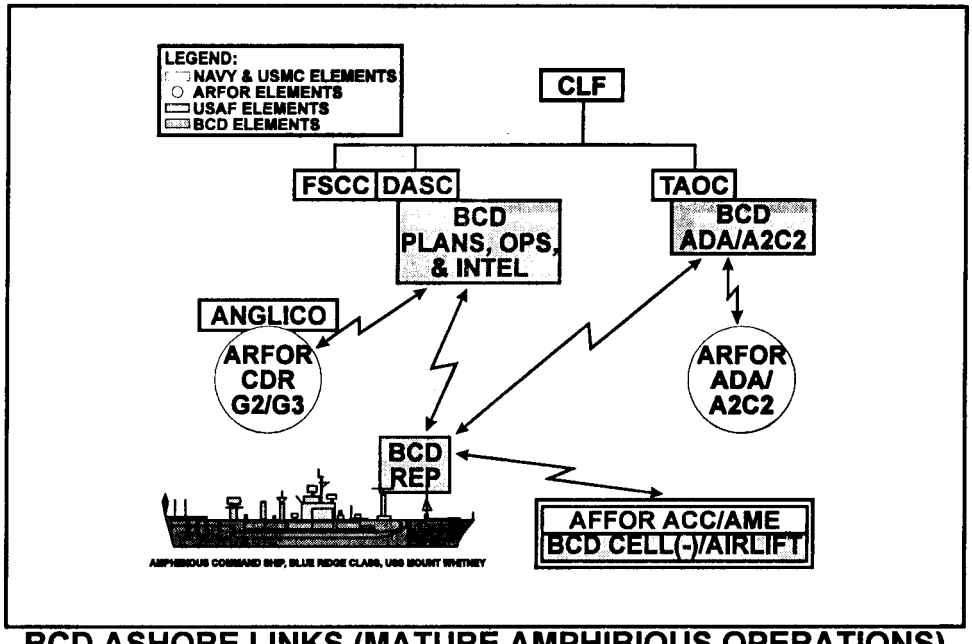
The Marine TACC evolves from the TADC. During the phasing of control ashore process, the CLF normally establishes a TADC ashore. The TADC is comprised of the same equipment and personnel who will operate the MAGTF TACC. Once the CATF and CLF agree that the MAGTF is capable of coordinating and managing aviation functions ashore, the responsibilities are passed to the Marine TADC. The functions include the following:

- All aviation planning and C^2 functions.
- Sector airspace management functions.
- Planning functions for landing force aviation.

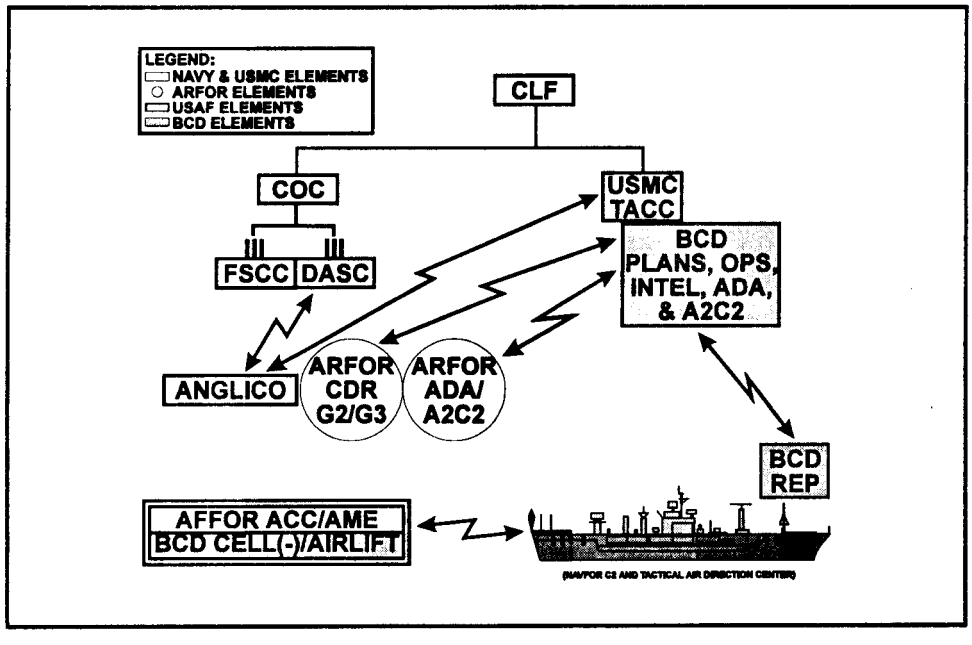
Upon passage of the responsibilities, the Marine TADC assumes the functions as the Marine TACC and the USN TACC reverts to the position as the USN TADC.

The linkage of the BCD with the individual MACCS sections during the initial phase of an amphibious operation is shown in the figure at the top of the next page. Linkage during the mature phases of an amphibious operation are shown at the bottom.

BCD ASHORE LINKS (INITIAL AMPHIBIOUS OPERATIONS)



BCD ASHORE LINKS (MATURE AMPHIBIOUS OPERATIONS)



APPENDIX C
BCD TRAINING

BCD personnel must be qualified in there military occupation specialty as early in their assignment as possible so that ***follow on training time focuses on collective training and sustainment of individual skills. Duties in the BCD are highly technical in nature. Much of the individual training comes from the wide variety of courses taught at various service schools. The BCD conducts section collective training. Joint training exercises also provide a medium for collective training of the BCD.***

Formal Training

Under ideal conditions, all members of the BCD should attend formal training. BCD personnel should be prioritized to attend courses most closely related to their individual area of expertise. BCD personnel should also attend courses not directly related to their area of expertise to give the BCD a cross-trained capability. Cross training enhances BCD flexibility to tailor support for contingencies when a full BCD is not needed.

At a minimum, BCD personnel should attend the following courses as appropriate to their duty position.

- Joint Air Operations Staff Course (JAOSC) at the USAF Air-Ground Operations School (AGOS), Hurlburt Field, FL. The objective for JAOSC is to train selected officers and senior NCOs to plan, coordinate, control, and integrate air and surface forces in joint operations. The course focuses on those battle management functions performed to integrate theater air and surface forces during joint combat operations, this course awards the ASI 5U, Air operations officer, and ASI Q8, Tactical air operations NCO.

- Joint Firepower Control Course (JFCC) at USAF AGOS, Hurlburt Field, FL. This course teaches jointly approved concepts, doctrine, procedures, and techniques for integrating the services combat efforts in joint operations. The course focuses at division level and below. It should not be a substitute for JAOSC, but does provide good information on joint air-ground procedures.

- Joint Doctrine Air Campaign Course (JDACC) at Maxwell Air Force Base (AFB), Alabama. This is a two week course covering doctrine closely related to the subject matter and responsibilities addressed in this field manual.

- Joint Warfare Center Joint Targeting Course at the Navy Marine Intelligence Center, Dam Neck, Virginia. This course is designed to train mid-level intelligence personnel. The curriculum mixes joint targeting philosophy, targeting methods, techniques and real world scenarios and exercises.

- USAF Air Mobility School (AMS) at McGuire AFB, New Jersey. The course defines the components of the air mobility system which planners and users must consider in managing airlift and in understanding air mobility strategy and doctrine.

- Reconnaissance and Surveillance Symposium held at the Defense Intelligence College, Boiling AFB, Washington, D.C. This is a two day course that provides a basic understanding of the national and theater level reconnaissance and surveillance assets, their tasking and management in the intelligence community.

- Joint Intelligence Course at the Defense Intelligence College, Boiling AFB, Washington, D.C. This course provides newly assigned intelligence personnel a basic understanding of the missions, functions, and organizations of national, joint, and combined intelligence activities.

Because operations could be on land or sea-based with the USN or Marine Corps, BCD members selected to conduct operations with the USN or Marine Corps should receive the following training:

- Terms and shipboard procedures peculair to the USN and USMC.
- Water and survival frequent flyer training (WSFFT) no later than 30 days prior to scheduled training with the USN or Marines (required training prior to deployment).
- Supporting Arms Coordination Center (SACC) Course at the Naval Amphibious Base (NAVAMPHIBASE), Little Creek, Virginia. The SACC Course orients personnel on the functioning of the SACC and TACC afloat and includes a walk through of shipboard facilities in the Naval Shipyard. Shipboard communications are extensively addressed.
- Amphibious Indoctrination Course at NAVAMPHIBASE, Little Creek, Virginia.
- Marine Air Weapons Tactical Squadron (MAWTS) Course at Yuma, Arizona.

Some European theater specific courses available are:

- Joint Combat Operations Course (USAFEJCOC) at USAFE Air-Ground Operations School, Sembach Airbase, Germany. This course focuses on the integration of US armed forces into the North Atlantic Treaty Organization (NATO) area of responsibility.
- NATO Air-Ground Operations at Dorset, United Kingdom. This course provides instruction in the principles, planning, and conduct of joint conventional offensive and defensive air operations in the allied command Europe.

With the continuous upgrading of automation hardware and software, there will always be a need for operator training on automated systems currently fielded to the BCD. Currently, the following training is recommended in this area.

- CTAPS Operator Technician Course (COTC) at USAFAGOS. (The fourth week of training in JAOSC contains the same learning objectives as COTC.)
- AGCCS/STACCS operator training at home station, and interface training during joint exercises, to include proficiency enhancement in applications, tools, and interfaces such as the following:

  -target management display and analysis (TMDA).

  -Automated briefing system (ABS).

  -Staff journal.

  -CTAPS.

  -ASAS.

  -AFATDS.

  -CSCCS.

  -FAADC^{3}I.
- AFATDS operator and supervisor training at the US Army Field Artillery School. This course awards ASI F9, AFATDS Operator/Supervisor.
- ASAS training is provided by new equipment training teams during ASAS

fielding. ASAS training support packages are left with the unit for sustainment and new personnel training.

- FAADC^{3}I training provided by the US Army Air Defense School.

Selected BCD personnel should receive training in AWACS and/or ABCCC operations and be prepared to deploy early during contingency operations as an Army liaison from the BCD until theater communications, command, and control capabilities mature.

Training Task List

Training objectives for individual training should focus on the following mission task list:

- Know basic joint doctrine to include missions and organizations for combat for each of the services.
- Comprehend C^3 systems, related procedures and coordination associated with air and surface support to joint operations.
- Apply intelligence and other information from all sources to the decision-making process for joint operations.
- Know threat systems and the doctrinal force employment concepts US forces will likely encounter in their proposed theater of operations.
- Know missions and major weapons systems used by US forces in joint operations.
- Know concepts, capabilities, limitations, and operational procedures for combat targeting, J-SEAD, **C^{2}W,** reconnaissance, airlift, special operations, and space support to joint operations.
- Understand the ARFOR military decision-making process for planning, coordination, control, and execution of integrated joint operations at the operational level of war.
- Comprehend and apply knowledge of airspace control procedures and measures that support the ARFOR commander's activity in joint operations.
- Know the ATO process, the joint force and Army inputs to, and ATO products of, the ATO cycle.
- Know the contribution of the BCD to the ATO and ACO development and execution.
- Use CTAPS tools to extract the ATO and the ACO when required. Understand higher-level CTAPS applications support to joint operations to include the following:

  -Computer assisted force management system (CAFMS) operations (OPS).

  -CAFMS PLANS.

  -Advanced planning system (APS).

  -Intelligence correlation module (ICM).

  -Rapid application of air power (RAAP).

  -Route evaluation module (REM).

  -Improved many on many (IMOM).

  -ADS.

  -Joint decision support system (JDSS).

  -Joint munitions effectiveness manual (JMEM).

  -Joint interoperability of tactical command and control systems (JINTACCS) joint message preparation and parsing (JMPP).

- Know the USMTF system.

Environmental Protection

Protection of natural resources has become an ever-increasing concern in Army training programs. All unit leaders have the responsibility to reduce, and if possible eliminate, damage to the environment when conducting training. Environment risk management parallels safety risk management and is based on the same philosophy and principles. It consists of the following steps:

Identify environmental hazards

Identify potential sources of environmental degradation during analysis of METT-T factors. The environmental hazards are conditions with the potential for polluting air, soil, or water and/or destroying cultural or historical artifacts.

Assess the hazards

Using the environmental risk assessment matrixes found in Appendix D, analyze the potential severity of environmental degradation for each training activity. The matrixes allow trainers to quantify the risk to the environment as extremely high, high, medium, or low, The risk impact value is an indicator of the levels of severity.

Make environmental risk decisions

On the basis of the risk assessment, make decisions and develop measures to reduce significant environmental risks.

APPENDIX D
ENVIRONMENTAL AWARENESS TRAINING

Awareness of the impact to the environment for each operation helps future operations and in peacetime saves vital resources. Using sound environmental practices during peacetime aids in soldiers performing their mission during wartime without excessive damage or permanently altering the environment. Human error causes many environmental problems caused by the Army. These human errors in peacetime in the United States and in host nations (HN) now result in monetary and punitive actions being taken against the individual, not the unit. Below are some major reasons for human error.

- ***Command failure --*** *clear, practical standards do not exist at the lowest level.*
- ***Training failure -*** *standards exist, but adherence to the standards is not stressed during training.*
- ***Leader failure --*** *standards are taught but not enforced.*
- ***Individual failure --*** *standarads are known but not followed*

Environmental Standards

Realistic training can be done without permanent damage to the environment. Environmental laws and regulations do not hinder training. They should be considered during the planning process and employed at all levels of planning and execution. Commanders can use the following steps to help their unit practice environmentally sound training and operations that do not permanently harm the environment.

Set high standards

Ensure all unit members know the state or HN environmental laws for the location of the operation. Environmental adherence is mandatory.

Know your soldiers

The newly assigned soldier may not be familiar with the local (state or HN) environmental laws. These new soldiers will be trained by the unit environmental officer. He will keep the commander informed of the environmental status of the unit.

Know your equipment

Know the condition of all equipment in your unit. Many check sheets and publications are available to guide in determining the status of the equipment.

Apply dispatch discipline

Many environmental hazards involve equipment that should not be operated. Tough-minded dispatch discipline reduces environmental contamination. Hold the appropriate leaders accountable for the condition of their equipment.

Manage risks in training

Integrate the requirement for environmental stewardship with the demand for realistic combat training. Environmental stewardship is achieved through the management of inherent mission risks.

Maintain awareness

Always be aware of the mission-critical importance of environmental stewardship in your operations. Do not allow yourself to relax your vigil and become complacent when everything is running smoothly. Constant awareness of the requirement for including environmental considerations in all day-to-day unit operations is key to keeping peak readiness.

Risk Management

Integrate environmental stewardship into the planning and application phases of operations. Besides analyzing the task, this allows the leader to manage

risk. Risk management is smart decision making. It focuses on task accomplishment while reducing the hazards that could cause environmental damage. Since all soldiers make decisions that entail environmental use, risk management techniques apply to soldiers at all levels. Leaders must train to use risk management skills and techniques to establish standards that effectively balance risk with operational objectives. There is a risk assessment work sheet below to help leaders plan safe training exercises.

Environmental Risk Assessment Worksheet

Environmental area:	Rating:					
Unit Operations	Risk Impact					
Movement of heavy vehicles/systems	5	4	3	2	1	0
Movement of personnel and light vehicles/systems	5	4	3	2	1	0
Assembly area activities	5	4	3	2	1	0
Field maintenance of equipment	5	4	3	2	1	0
Garrison maintenance of equipment	5	4	3	2	1	0

Overall Environmental Risk Assessment Form

	Movement of heavy vehicles/systems	Movement of personnel and light vehicles/systems	Assembly area activities	Field maintenance of equipment	Garrison maintenance of equipment	Risk impact value
Air pollution						
Archeological and historical sites						
Hazardous material/waste						
Noise pollution						
Threatened/endangered species						
Water pollution						
Wetland protection						
Overall risk impact value						

Risk Impact Value Categories

Category	Range	Environmental Damage	Decision-maker
Low	0-58	Little or none	Appropriate level
Medium	59-117	Minor	Appropriate level
High	118-149	Significant	Division cmdr.
Extremely High	150-175	Severe	MACOM cmdr.

GLOSSARY

A

A^2C^2 Army airspace command and control. Consists of actions that ensure the synchronized use of airspace and enhance the C* of the forces using airspace. A^2C^2 includes the organizations, personnel, facilities, and procedures needed to perform the airspace control function. When linked with the airspace control authority by communications, standardized procedures, and liaison, A^2C^2 becomes part of the theater integrated airspace control system.

AADC area air defense commander. In a unified command, subordinate unified command, or joint task force, the commander will assign overall responsibility for air defense to a single commander. Normally, this will be the component commander with the preponderance of air defense capability and the command, control, and communications capability to plan and execute integrated air defense operations. Representation from the other components involved will be provided, as appropriate, to the area air defense commander's headquarters. (JP 1-02.)

AAGS Army air-ground system

AALPS automated air loading planning system

AAW anti-air warfare

ABCCC airborne battlefield command and control center

ABCS Army battle command system

ABS automatic briefing system

ACA airspace control authority

ACB air campaign branch

ACC air component commander

ACE analysis and control element; aviation combat element

ACM airspace control measures

ACO airspace control order. An order implementing the airspace control plan that provides the details of the approved requests for airspace control measures. It is published either as part of the air tasking order or as a separate document. (JP 1-02.)

ACP airspace control plan. A document approved by the JFC that provides specific planning guidance and procedures for the airspace control system for the joint force AOR. (JP 1-02)

AD air defense

ADA air defense artillery. The part of the Army responsible for protecting the force and selected geopolitical assets from aerial attack, missile attack, and surveillance. Weapons and equipment for actively combating air targets from the ground.

ADE air defense element

admin administration

ADOCS automated deep operations coordination system

ADP automatic data processing

ADSI air defense system integrator

ADW air defense warning

Air Defense Warning Conditions. A degree of air raid probability according to the following code. The term air defense division/sector referred to herein may include forces and units afloat and/or deployed to forward areas, as applicable.

Air defense warning yellow- attack by hostile aircraft and/or missiles is probable. This means that hostile aircraft and/or missiles are en route toward an air defense division/sector, or unknown aircraft and/or missiles suspected to be hostile are en route toward or are within an air defense division/sector.

Air defense warning red- attack by hostile aircraft and/or missiles is imminent or is in progress. This means that hostile aircraft and/or missiles are within an air defense division/sector or are in the immediate vicinity of an air defense division/sector with high probability of entering the division/sector.

Air defense warning white - attack by hostile aircraft and/or missiles is improbable. May be called either before or after air defense warning yellow or red. The initial declaration of air defense emergency will automatically establish a condition of air defense warning other than white for purposes of security control of air traffic. (JP 1-02.)

AFATDS automated field artillery tactical data system

AFB air force base

AFFOR air force forces

AFIWC Air Force information warfare center

AFLO Air Force liaison officer

AGCCS Army global command and control system. Replacement system for the standard theater army command and control system (STACCS).

AGOS Air-Ground Operations School

Al air interdiction. Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (JP 1-02.)

AIG address indicator groups

AIO air intelligence officer

AIRSUPREQ air support request

ALCC airlift coordination cell

allocation (air) The translation of the apportionment decision into total numbers of sorties by aircraft type available for each operation and task.

ALLOREQ allocation request

AMC air mobility command

AME air mobility element

AMS Air Mobility School

AMSS air mobility support squadron

ANGLICO air and naval gunfire liaison company

AO area of operations. Surface (land or sea) commanders subordinate to a JFC (or joint task force commander) have areas of operations designated by the JFC.

AOA amphibious objective area

AOC air operations center

AOR area of responsibility. The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations (re: JCS J-7 Memo, 20 Ott 94, Subject Joint Pubs Terminology Promulgations). Joint force commanders (including joint task force commanders) have areas of responsibility designated by the authority establishing the joint force.

apportionment (air) The determination and assignment of the total expected air effort by percentage and/or by priority that should be devoted to the various air operations or geographic areas for a given period of time.

APS advanced planning system

ARFOR Army forces

ASAS all source analysis system

ASCC Army service component commander

ASCS air support control section

ASI additional skill identifier

ASOC air support operations center

ASWC antisubmarine warfare commander

ATA Army technical architecture

ATACMS Army tactical missile system

ATC air traffic control

ATCS air traffic control section

ATCCS Army tactical command and control system

ATF amphibious task force

ATM air tasking message

ATMCT air terminal movement control team

ATMD Army theater missile defense

ATO air tasking office; air tasking order

ATOB air tasking order branch

ATOC air terminal operations center

ATOCONF air tasking order conference

ATS air traffic services. Air traffic services are defined as services performed by air traffic control specialists or air traffic organizations across the range of military operations. The services include but are not limited to: Army airspace command and control (A^2C^2) services, airspace information services, terminal services, forward area support services, landing area and airfield services, NAVAID services, and air traffic control maintenance services.

AW air warfare

AWC air warfare commander

AWS air warfare section

AWACS airborne warning and control system

B

BCD battlefield coordination detachment

BCE battlefield coordination element

BCTP battle command training program

BDA battle damage assessment

BDZ base defense zones

BMC^{4}I ballistic missile command, control, communications, computer, and intelligence

C

C^2 command and control

C^{2}W command and control warfare

C^{3}I command, control, communication and intelligence

C^{4}I command, control, communication, computers and intelligence

CAF combat air force

CAFMS computer assisted force management system

CAP combat air patrol

CAS close air support. Air action by fixed- and rotary-winged aircraft against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces. (JP 1-02.)

CAT crisis action team

CATF commander amphibious task force

CCG commander carrier group

CCIR commander's critical intelligence requirements

C-CS communications-computer systems

CESI communications-electronic standing instructions

CG AWC carrier group air warfare commander

CID combat intelligence division

CINC commander-in-chief

CLF commander landing force

COA course of action

COE common operating environment

COD combat operations division

COMAFFOR commander air force forces

COMARFOR commander, Army forces

COMSEC communications security

CONOPS concept of operations

counterair A USAF term for air operations conducted to attain and maintain a desired degree of air superiority by the destruction or neutralization of enemy forces. Both air offensive and air defensive actions are involved. The former range throughout enemy territory and are generally conducted at the initiative of the friendly forces. The latter are conducted near or over friendly territory and are generally reactive to the initiative of enemy air forces. (JP 1-02.)

COTC CTAPS Operator Technician Course

CPD combat plans division

CRC control and reporting center

CRTD commander's real-time tactical display

CSS combat service support

CSSC combat service support center

CSSCS combat service support control system

CTAPS contingency theater automated planning system

CTF commander task force

CTIPS command and control information processing system

CTOC corps tactical operations center

CTT commander's tactical terminal

CV AREC carrier air element coordinator

CVW STWC carrier air wing strike warfare commander

CWC composite warfare commander

D

DA Department of the Army

D/AACO departure/arrival airfield control group

DASC direct air support center

datum The mathematical model of the earth used to calculate the coordinates on any map, chart, or survey system. Many countries use their own datums when they make their maps and surveys. These "local datums" may be completely different from those used by US Forces.

DCI director of combat intelligence

DCO director of combat operations

DESIGAREA designated area

DESRON destroyer squadron

DIRMOBFOR director of mobility forces

DISUM daily intelligence summary

DMCC deputy mission crew commander (on board J-STARS)

DMS defense message system

DO deputy commander of operations

DOB defensive operations branch

DOCC deep operations coordination center

DOD Department of Defense

DZ drop zone

E

EA electronic attack

EAC echelon above corps

EW electronic warfare

EUSA Eighth US Army

F

FAADC^{3}I forward area air defense command, control, communications, and intelligence

FAADS forward area air defense systems. Weapons normally employed to support maneuver forces, defending the supported commander's most critical assets against attack by enemy close air support aircraft and helicopters. They are also used in rear areas to defend such critical assets as air and sea ports of entry, command and control facilities, logistical bases, air bases, and other key sites in the theater and/or corps area.

FDS fire direction system

FEZ flight engagement zone

FLOT forward line of own troops. A line which indicates the most forward positions of friendly forces in any kind of military operation at a specific time. The FLOT normally identifies the forward location of covering and screening forces.

FM field manual

FORSCOM Forces Command

FP force projection

FSCL fire support coordination line

FSCM fire support coordination measures

FSE fire support element

G

GAT guidance, apportionment, and targeting. A name applied to the meeting used in some commands to address these agenda items during the conduct of the joint targeting cycle and development of the joint ATO.

GCCS global command and control system

GDSS global decision support system

GLO ground liaison officer

GPS global positioning system. A receiver which allows the user to read his location coordinates in any of several datums; some permit user specified datums.

GTN global transportation network

H

HCS helicopter coordination section

HDC helicopter control center

HF high frequency

HIMAD high-to-medium-altitude air defense. HIMAD systems are deployed to defend the theater and/or corps commander's high priority assets and forces against hostile air and missile attack.

HN host nation

HQ headquarters

HPT high-payoff target (Army, USMC). The high value targets identified through war-gaming as essential to be acquired and attacked to support the successful accomplishment of the commander's mission. War-gaming provides the expected time and location of acquisition and attack to support synchronization, and assists matching of appropriate acquisition and attack systems to each HPT.

HVT high-value target (Army, USMC). The targets identified by the intelligence officer as critical to the success of the enemy commander's plan. The intelligence officer identifies these during IPB and briefs them in his intelligence estimate as critical to the success of the most threatening and/or most likely enemy courses of action.

I

ICM intelligence correlation module; improved conventional munitions

ICP inter-theater COMSEC package

IFF identification friend or foe. A system using electromagnetic transmissions to which equipment carried by friendly forces automatically responds, for example, by emitting pulses, thereby distinguishing themselves from enemy forces (Joint Pub 1-02). Note: Not all IFF models are encrypted.

immediate mission request: A request for an air strike on a target which by its nature could not be identified sufficiently in advance to permit detailed mission coordination and planning.

IMOM improved many on many

Intel intelligence

INTERCOM internal communications

INTSUM intelligence summary

IPB intelligence preparation of the battlefield

J

JAOC joint air operations center

JAOSC Joint Air Operations Staff Course

JCS Joint Chiefs of Staff

JDACC Joint Doctrine Air Campaign Course

JDSS joint decision support system

JFACC joint force air component commander

JFC joint force commander

JFCA joint force commander's agent

JFCC Joint Firepower Control Course

JFLCC joint force land component commander

JFSOCC joint force special operations component commander

JI joint inspection

JIC joint intelligence center

JINTACCS joint interoperability of tactical command and control systems

JIPTL joint integrated prioritized target list

JMC joint movements center

JMEM joint munitions effectiveness manual

JMIC Joint Military Intelligence Collage

JMPP joint message preparation and parsing

JOA joint operations area

JOC joint operations center

JOPES joint operations planning and execution system

JOTS joint operational tactical system

JP joint publication

JSAC joint supporting arms coordination

JSE joint support element

J-SEAD joint suppression of enemy air defenses

JSOI joint signal operating instructions

JSOTF joint special operations task force

JSRC joint search and rescue center

J-STARS joint surveillance and target acquisition radar system

JTA joint technical architecture

JTCB joint targeting coordination board

JTL joint target list

JTF joint task force

JTMD joint theater missile defense

JITP joint tactics, techniques, and procedures

L

LAN local area network

LCC land component commander

LO liaison officer

LRC logistics readiness center

LRP limited response package

LZ landing zone

M

MAAP master air attack plan

MACCS Marine air command and control system

MAGTF Marine air-ground task force

MACOM major command

MARFOR Marine Corps forces

MARLO Marine liaison officer

MAWTS Marine Air Weapons Tactical Squadron

MCS maneuver control system

MCS/P maneuver control system-Phoenix

MEH material handling equipment

METL mission essential task list

MI military intelligence

MISREP mission report

MLRS multiple launch rocket system

MSE mobile subscriber equipment

N

NAF numbered air force

NAI named area of interest. The geographic area where information that will satisfy a specific information requirement can be collected.

NALE naval liaison element

NATO North Atlantic Treaty Organization

NAVAID navigation aids. Devices placed on the ground which help aircraft in navigation.

NAVAMPHIBASE Naval Amphibious Base

NAVFOR naval forces

NBC nuclear, biological, and chemical

NCO noncommissioned officer

NCOIC noncommissioned officer in charge

NGLO naval gunfire liaison officer

NTACS Navy tactical air control system

O

OOB offensive operations branch

OPCON operational control

opns operations

OPLAN operations plan

OPORD operations order

OPSEC operations security

OPTASKLINK operational tasking data link

OSA operational support airlift

P

PAX passenger

PIR priority intelligence requirements

PLAD plain address

PLANORDCHNG plans/orders change

POL petroleum, oil, and lubricant

preplanned mission request A request for an air strike on a target which can be anticipated sufficiently in advance to permit detailed mission coordination and planning. Normally reflected in the **ATO.**

PSS plans and support section

PSYOP psychological operations

PZ pick-up zone

Q

QRP quick response package

R

RAAP rapid application of air power

RAP rocket assisted projectile

RAMCC regional air movement control center

RCC rescue coordination center

RECCE reconnaissance

REM route evaluation module

RI route indicator

RISTA reconnaissance, intelligence, surveillance, and target acquisition

ROE rules of engagement

RPV remotely piloted vehicle

S

SAAFR standard use Army aircraft flight routes. Routes which are established below the coordinating altitude to ease the movement of Army aviation assets. Normally, these routes are located in the corps through brigade rear area of operations.

SAC supporting arms coordinator

SACC supporting arms coordination center

SADO senior air defense officer

SAM surface-to-air missile

SASO stability and support operations

SATCOM satellite communications system

SAWC sector air warfare coordinator

SEMA special electronic mission aircraft. All US Army intelligence collection and dissemination aircraft.

SIF selective identification feature. A capability which, when added to the basic IFF system, provides the means to transmit, receive, and display selected coded replies. (Joint Pub 1-02.)

SINCGARS single-channel ground and airborne radio system

SITMAP situation map

SITREP situation report

SOCCE special operations command and control element

SOCOORD special operations coordinator

SOF special operations force

SOLE special operations liaison element

SOP standing operating procedures

SORTIEALOT sortie allotment

SPINS special instructions

SPT.GEOM support geometry

STACCS standard theater army command and control system

STU secure telephone unit

SUWC surface warfare commander

SWO senior watch officer

SYSAD system administration

SYSCONN system control center

T

TACC tactical air control center (Navy); tactical air command center (Marine)

TACFIRE tactical fire direction system

TACOPDAT tactical operations data

TACRON tactical air control squadron. Land based--A flexible, administrative component of a tactical air control group, which provides the control mechanism for a land-based tactical air control center (TACC), a tactical air direction center (TADC), or tactical air control parties. Ship based-Provides the control mechanism for the ship-based TADC or ship-based TACC.

TAC tactical air controller

TACS theater air control system

TADC tactical air direction center

TADIL-A tactical data information link-Army

TADIL-J tactical data information link-joint

TAI target area of interest. The geographic area where high-value targets can be acquired and engaged by friendly forces. Not all TAIs form part of the friendly course of action. Only TAIs associated with high-payoff targets identified during war-gaming are of interest to the staff.

TAIS tactical airspace integration system

TALO theater air liaison officer

TAMCA theater army movement control agency

TAO tactical air officer

TAOC tactical air operations center

TAR tactical air reconnaissance; tactical air request

TASM tactical air support module

TBM tactical ballistic missile

TDDS tactical data display system

TIBS tactical information broadcast system

TM theater missile

TMD theater missile defense

TMDA target management display and analysis

TNL target nomination list

TOC tactical operations center

TPFDD time-phased force deployment data

TRACE total risk assessment cost estimate

TRAP tactical related applications

TRP theater response package

U

UAV unmanned aerial vehicle. A powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload. Ballistic or semi-ballistic vehicles, cruise missiles, and artillery projectiles are not considered unmanned aerial vehicles. (Joint Pub 1-02.)

UHF ultrahigh frequency

ULN unit line number

US United States

USAF United States Air Force

USAFAS United States Field Artillery School

USAFE United States Air Force Europe

USAFEJCOC United States Army Forces Europe Joint Combat Operations Course

USAR United States Army Reserve

USAREUR United States Army Europe

USMC United States Marine Corps

USMTF United States message text format

USPACOM United States Pacific Command

W

WAN wide area network

weapons control status The three types of weapon control used by a commander to control the fires of air defense artillery weapons. Different status may be applied to fixed- and rotary-winged aircraft. These are *weapons free* -- engage all aircraft not positively identified as friendly; *weapons tight* -- engage all aircraft positively identified as hostile; *weapons hold* -- engage aircraft for self-defense.

WEZ weapons engagement zone. Consists of defined dimensions of airspace. A WEZ will be designated by the type of weapons system which will be responsible for the defined airspace. For example, a FEZ is a fighter engagement zone where aircraft will engage the enemy air threat in the defined volume of airspace.

WSB weather support branch

WSFFT water survival frequent flyer training.

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