FM 100-13-1

Tactics, Techniques, and Procedures (TTP)
for the
BATTLEFIELD COORDINATION DETACHMENT (BCD)

HEADQUARTERS
DEPARTMENT OF THE ARMY

Field Manual
No. 100-13-1

Headquarters
Department of The Army
Washington, DC, 20 March 1998

Tactics, Techniques, and Procedures (TTP)
for the

BATTLEFIELD COORDINATION DETACHMENT (BCD)

TABLE OF CONTENTS

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

Chapter 2. Operations

Chapter 3. Plans

IV. OPERATIONAL TASKS (PLANS INTELLIGENCE SECTION). 4-8

Chapter 5. Air Defense

Chapter 6. Airspace Management

Chapter 7. Airlift

Chapter 8. System Administration

Appendix A. Advanced Field Artillery Tactical Data System (AFATDS)

Appendix D. All Source Analysis System – Remote Workstation (ASAS-RWS)

Appendix E. Global Command and Control System – Army (GCCS-Army)

LIST OF TABLES

LIST OF FIGURES

PREFACE

"We must begin now to change the way we think and organize staffs, information flow, procedures and possibly organizations. Existing and evolving information technologies will support and shape the evolution of procedures and processes."...

Training and Doctrine Command (TRADOC)
Pamphlet 525-5, Force XXI Operations

I. WHAT FIELD MANUAL (FM) 100-13-1 IS:

- A snapshot of the current status of the automated Battlefield Coordination Detachment (BCD) initiative.
- A more detailed explanation of the command, control, communications, computers, and intelligence (C4I) systems described in FM 100-13, and their application to the BCD's mission within an automated architecture.
- A requirements document for functionality required but not yet available on fielded systems.
- Volume 2 of a 6-volume edition.
  - ➢ Volume 1: FM 100-13, BCD (Sep 96)
  - ➢ Volume 2: FM 100-13-1, Tactics, Techniques, and Procedures (TTP) for the Battlefield Coordination Detachment (Oct 97)
  - ➢ Volume 3: BCD Technical Bulletin (TB) (to be published (TBP) by Program Manager (PM) Field Artillery Tactical Data System (FATDS))
  - ➢ Volume 4: C4I Device Operators Manuals
  - ➢ Volume 5: C4I Device Maintenance Manuals
  - ➢ Volume 6: BCD Unit Standard Operating Procedure (SOP)

II. WHAT FM 100-13-1 IS NOT:

- An operator's manual for a C4I device. (Read Volume 4)
- A replacement for unit's SOP. (Read Volume 6)
- A device or network trouble shooting manual. (Read Volume 3)
- The only way to apply the fielded systems to the BCD mission.

III. WHAT FM 100-13-1 IS BASED UPON:

- Publications: FMs, Joint Manuals, BCD SOPs, existing device Technical Manuals (TM), Course Handouts (Air/Ground Operations School (AGOS), Device Operators Course).
- Insights captured from 1st BCD exercises and Depth and Simultaneous Attack Battle Lab (DSABL) integration testing.

- After Action Reviews (AAR) published by 1st BCD participating Army Forces (ARFOR), TRADOC System Managers (TSM), and PMs.
- Comments about working drafts from BCDs, PMs, TSMs, Device Representatives, and TRADOC organizations (AGOS and Battle Labs).

IV. TO WHOM FM 100-13-1 APPLIES:

- All BCDs from a core task perspective as outlined in FM 100-13 and augmented through research. BCDs should apply existing functionality to theater-specific missions and identify requirements not satisfied by existing architecture.
- Units assigned as the ARFOR, regardless of size (Army, Corps, or Division). Note the ARFOR actions required to maximize the effectiveness of the BCD's automation suite.
- Joint Force Air Component Command (JFACC) Joint Air Operations Center (JAOC) personnel, regardless of service (US Air Force (USAF), US Navy (USN), US Marine Corps (USMC)), in a BCD awareness context only and is not, nor should it be construed as, a binding document on the other services. This document may be used as a baseline for Memorandums of Understanding (MOU) or Memorandums of Agreement (MOA) between the services involved.

V. HOW FM 100-13-1 IS ORGANIZED:

- Chapters 2 through 7 lists the operational tasks of a BCD section (operations, plans, intelligence, air defense, and airspace management) from FM 100-13. The automated capabilities relating to each operational task are listed including device limitations and workarounds.
- Appendices include the capabilities of the automated devices as they pertain to the BCD, related hardware and software, and training contacts. Other appendices detail information needed from outside agencies.
- A glossary of acronyms as well as a list of references, to include associated web sites, is also included.

VI. FM 100-13-1 REVISIONS:

- Share lessons learned/insights gained through exercises, new equipment training (NET) or research with the Commander USAFAS, Warfighter Integration and Development Directorate (WIDD), ATTN: ATSF-DD, Ft Sill, OK 73503. POC is Mr. Belinski, DSN 639-5644/ (405) 442-5644.

Chapter 1

Introduction

I.   AUTOMATED BCD ARCHITECTURE.

The BCD accomplishes its mission with organic unit equipment and JAOC-provided systems. It task-organizes its systems to meet operational constraints (personnel, working space) and theater-specific requirements. Normally, BCDs operate with the equipment in Table 1.1 below.

Table 1.1 Automated BCD Architecture

Section	System(s)	Provider
Operations	1 AFATDS	BCD / US Army
	1 GCCS-Army	BCD / US Army
	1 MCS	BCD / US Army
	1 CTAPS	JAOC / JFACC
Plans	1 AFATDS	BCD / US Army
	1 GCCS-Army	BCD / US Army
	1 CTAPS	JAOC / JFACC
Intelligence	2 ASAS-RWS	BCD / US Army
Air Defense	1 AMDWS	BCD / US Army
	1 ADSI	JAOC / JFACC
	1 TRE	JAOC / JFACC
Airspace Management	1 AFATDS	BCD / US Army
	1 CTAPS	JAOC / JFACC
Airlift	1 C2IPS	JAOC / JFACC
BCD Total	3 AFATDS	BCD / US Army
	2 GCCS-Army	BCD / US Army
	1 MCS	BCD / US Army
	2 ASAS-RWS	BCD / US Army
	1 AMDWS	BCD / US Army
	3 CTAPS	JAOC / JFACC
	1 C2IPS	JAOC / JFACC
	1 ADSI	JAOC / JFACC
	1 TRE	JAOC / JFACC

II.   DEVICE FUNCTIONALITY.

General capabilities of the C4I systems identified in Table 1.1 are described below. More information about BCD applications of the systems can be found in the device's associated appendix.

ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS).

AFATDS is a multi-service (Army and Marine Corps) fire support software system that operates on the Army's common hardware for the Army Battle Command System (ABCS). It interfaces with the Contingency Theater Automated Planning System (CTAPS) in support of JAOC Air Tasking Order (ATO) production; provides visual situational awareness displaying: unit locations, range fans, fire support coordination measures (FSCM), airspace coordination measures (ACM), target overlays, battlefield geometry, enemy locations, and common reference systems; and processes incoming Army Tactical Missile System (ATACMS) fire missions received from Air and Missile Defense Workstation (AMDWS).

GLOBAL COMMAND & CONTROL SYSTEM - ARMY (GCCS-ARMY).

GCCS-Army provides a single seamless command and control (C2) system built around the Defense Information Infrastructure Common Operating Environment (DII COE) and is being integrated with the Department of Defense (DoD) Global Command and Control System (GCCS). GCCS-Army is fundamentally GCCS with additional Army functionality.

GCCS-Army exhibits the Joint globally shared common operational picture (COP). The COP includes both blue and red ground, air, and sea forces as well as battlefield geometry. Air tracks can be color-coded to reflect different ATO sorties. Because the ground, air, and sea pictures are received from different sources other than BCD automated systems (EXCEPTION: GCCS-Army may also get red ground from BCD All-Source Analysis System-Remote Workstation (ASAS-RWS) and refreshed at different intervals, the GCCS-Army picture may differ from these systems' pictures.

MANEUVER CONTROL SYSTEM (MCS).

MCS provides the principle operational interface between ABCS devices and is the hub of information distribution for the BCD. It receives, processes, and displays automated, on-line, near real-time information from a variety of tactical C2 systems. MCS integrates the maneuver function with the C2 systems of the other four functional areas (Fire Support (FS), Air Defense (AD), Intelligence/Electronic Warfare (IEW), and Combat Service Support (CSS)).

ALL SOURCE ANALYSIS SYSTEM - REMOTE WORKSTATION (ASAS-RWS).

ASAS-RWS is the IEW subelement of ABCS. It provides the fused intelligence picture as received from the supporting Analysis Control Element (ACE). ASAS-RWS displays friendly and enemy units, receiving enemy units from the ACE at ARFOR and friendly units through MCS. The ASAS-RWS disseminates the enemy picture to MCS. ASAS-RWS is used for target validation and battle damage assessment (BDA).

Chapter 2

Operations

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare devices for operations in theater and for shipping. Prior to shipping, AFATDS, GCCS-Army, and MCS should be loaded with:

- Digital maps and map overlays for the area of operations received from ARFOR G3.
- Databases with friendly unit designs, unit identification codes (UIC), and locations received from ARFOR G3.
- Internet protocol (IP) addresses for BCD, JAOC, and ARFOR counterpart devices.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure the device for operations and verify connectivity with all agencies (BCD, JAOC, and ARFOR):

- Inspect systems for obvious damage during shipping.
- Connect systems to internal local area network (LAN).
- Power-up and initialize systems (reset IP addresses, if necessary).
- Ping other BCD systems, once all are on-line.
- Set-up onto the JAOC LAN.
- Login/Addressing/Affiliation.
- Operational checks.
- Verify/update friendly and enemy databases.

III. OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. Includes device capabilities, known limitations in brackets [ ], and suggested workarounds in parentheses ( ):

OPS-1. MONITOR EXECUTION OF THE CURRENT ATO IN REGARD TO SORTIES PLANNED AGAINST LAND FORCE NOMINATED TARGETS.

- CTAPS displays ATOs by various operator selectable sorts.
- AFATDS prints the air status chart (ASC) for BCD Operations to track missions.

- GCCS-Army displays COP (Air Tracks) for all ATO missions. Operator can display all ATO missions to include targets on COP as well as color code sortie packages.
- Update JAOC on ARFOR request to change, divert, or cancel air mission.

OPS-2. COORDINATE WITH THE ARFOR TACTICAL OPERATIONS CENTER (TOC), DEEP OPERATIONS COORDINATION CELL (DOCC), THEATER MISSILE DEFENSE (TMD) CELL (FOR THEATER MISSILE TARGETS), AND JAOC COMBAT OPERATIONS SECTION ON CANCELED, DIVERTED, OR REROLED MISSIONS PLANNED AGAINST ARFOR TARGETS.

Manual Task

OPS-3. REPORT ARFOR TARGET VALIDATION AND REFINEMENT (USUALLY 8 AND 4 HOURS BEFORE TIME ON TARGET) FOR AIR INTERDICTION (AI) and ELECTRONIC WARFARE (EW) SUPPORTING THE ARFOR.

- CTAPS sorts the ATO by various operator selectable fields (time on target (TOT), Request #, etc.) to facilitate 8 and 4 hour validation tracking. *[Operator sort and copy into an American Standard Computer II (ASCII) file and print list on personal computer (PC) or print directly to JAOC LAN printer.]*
- ASAS-RWS queries intelligence database for current target locations.

OPS-4. COORDINATE WITH THE JAOC COMBAT OPERATIONS DIVISION ON ARFOR IMMEDIATE REQUESTS FOR AI, EW, AND RECONNAISSANCE (RECCE) FLIGHTS.

- AFATDS receives immediate Air Support Request (ASR) from ARFOR.
- CTAPS displays ATO for BCD Operations to determine if a change, divert or retargeting can meet ARFOR ASR.
- BCD Operations conducts face-to-face coordination with the Chief, Combat Operations (CCO).
- AFATDS disseminates approval/disapproval and reason to ARFOR via free text message.

OPS-5. GET THE CURRENT FRIENDLY GROUND FORCE SITUATIONS FROM THE ARFOR G3 OPERATIONS/G3 AIR SECTION.

- GCCS-Army receives and displays Ground COP from the Joint Forces Commander's (JFC) GCCS. *[Ground COP not real-time. The timeliness of the COP depends upon the JFC guidance contained in*

the Information Management Plan (IMP). The IMP will detail the COP management, reporting times, and auto-forward requirements.]

- MCS receives and displays ARFOR's Blue Force picture (S507L) and battlefield graphics (S201) from ABCS devices. MCS broadcasts this information to most other BCD ABCS systems (with limitations).

OPS-6. INTERPRET THE ENEMY AND FRIENDLY GROUND FORCES SITUATION (MAINTAIN CURRENT SITUATION MAP (SITMAP) FOR THE JAOC). INFORM THE JAOC COMBAT OPERATIONS DIVISION OF SIGNIFICANT CHANGES IN OPERATIONS, OBJECTIVES, AND PRIORITIES.

- GCCS-Army displays Ground COP from the JFC's GCCS. GCCS-Army contains Microsoft (MS) Office Professional for creating briefing presentations.
- MCS displays ARFOR's Blue Force picture (S507L) and battlefield graphics (S201). MCS contains MS Office for creating briefing presentations.
- AFATDS displays ARFOR's Blue Force picture (S507L) and battlefield graphics (S201). [AFATDS does not contain MS Office to prepare PowerPoint briefing presentations to JFACC. (BCD must export information to MCS, GCCS-Army, or PC.)]
- [As a back-up, BCDs maintain manual SITMAP using information available on systems.]

OPS-7. PROVIDE GROUND LIAISON OFFICERS (GLOs) AND OTHER BCD SECTIONS WITH PERIODIC UPDATES ON THE CURRENT SITUATION.

- AFATDS (Operations) receives ARFOR information and updates Plans AFATDS and Airspace Management (ASM) AFATDS.
- GCCS-Army (Operations) receives JFC COP and updates GCCS-Army (Plans).
- ASAS-RWS (Operations) receives ARFOR ACE Information and updates ASAS-RWS (Plans). ASAS transmits this information.
- GLOs located at AF Wings with GCCS should use GCCS COP, Newsgroups/web pages, and E-mail to retrieve ARFOR and BCD information. [Other GLOs receive telephonic/facsimile (FAX) situational awareness updates.]

OPS-8. COORDINATE FIRING OF IMMEDIATE ATACMS MISSIONS WITH THE JAOC COMBAT OPERATIONS SECTION AND BCD ASM.

- AFATDS receives ATACMS launch request notification from ARFOR DOCC.
- AFATDS (time permitting) receives ACM requests from ARFOR Army Airspace Command and Control (A2C2). [If ARFOR A2C2 doesn't

have AFATDS, another ARFOR AFATDS *must be used when available.]*

- ARFOR ACM requests (restrictive operational zone (ROZ) at PAH and TAH) are passed to the JAOC Airspace Management Section and they are built into the CTAPS airspace deconfliction system (ADS). *[[1] No digital interface between AFATDS and CTAPS ADS. [2] BCD ASM must convert ACM grids from Universal Transverse Mercator (UTM) to latitude/longitude (LAT/LONG) and manually input into CTAPS.]*

NOTE: Since this is an immediate mission, there may not be time to build the ACM request in CTAPS. "Bullseye" call, Grid Reference System, or some other local SOP may apply in this case.

- CTAPS ADS checks ARFOR ACMs for conflicts identifies what agency controls any conflicting ACMs. *[The JAOC and BCD ASM coordinates manually with the agency.]*
- *[BCD Operations coordinates and deconflicts the ATACMS launch request with Combat Operations.]*
- AFATDS transmits approval of ACMs via "hand-shake" message to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, another ARFOR AFATDS must be used when available.]*

OPS-9. COORDINATE IMMEDIATE SPECIAL ELECTRONIC MISSION AIRCRAFT (SEMA) WITH THE JAOC COMBAT OPERATIONS SECTION AND BCD ASM.

- AFATDS receives immediate ASR from ARFOR.
- CTAPS displays ATO for BCD Operations to determine if an alert launch change, divert or retargeting can meet ARFOR ASR.
- BCD Operations conducts face-to-face coordination with the CCO.
- AFATDS disseminates approval/disapproval and reason to ARFOR via free text message.

OPS-10. REPORT THE USE OF AIRCRAFT DELIVERABLE MINES (I.E. Cluster-Bomb Unit (CBU)-89) TO THE ARFOR.

Manual Task

OPS-11. COORDINATE CHANGES TO THE FIRE SUPPORT COORDINATION LINE (FSCL) AND OTHER FSCMS WITH THE JFACC STAFF.

- MCS displays ARFOR's Blue Force picture (S507L) and battlefield graphics (S201). MCS contains MS Office for creating briefing presentations.
- AFATDS displays ARFOR's Blue Force picture (S507L) and battlefield graphics (S201). *[AFATDS does not contain MS Office to prepare*

> *PowerPoint briefing presentations to JFACC. (BCD must export information to MCS, GCCS-Army or PC.)]*

- *[BCD Operations coordinates FSCM changes with CCO face-to-face.]*

OPS-12. PASS JFACC REQUESTS FOR IMMEDIATE ATACMS AND OTHER SUPPORT TO THE ARFOR DOCC, TMD CELL (FOR TM TARGETS), OR FIRE SUPPORT ELEMENT (FSE) AS DIRECTED.

- *[CCO notifies BCD Operations of immediate ATACMS request.]*
- AFATDS transmits ATACMS call for fire (CFF) to ARFOR DOCC.
- AFATDS receives approval/disapproval and reason from ARFOR DOCC.
- Corresponding ACMs are built into ADS by BCD Operations (ROZ at PAH and TAH). *['No digital interface between AFATDS and CTAPS ADS. ²BCD ASM must convert ACM grids from UTM to LAT/LONG and manually input into CTAPS.]*

NOTE: Since this is an immediate mission, there may not be time to build the ACM request in CTAPS. "Bullseye" call, Grid Reference System, or some other local SOP may apply in this case.

- CTAPS ADS checks ARFOR ACMs for conflicts identifies what agency controls any conflicting ACMs. *[The JAOC and BCD ASM coordinates manually with the agency.]*
- AFATDS transmits approval of ACMs via "hand-shake" message to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, another ARFOR AFATDS must be used when available.]*

OPS-13. COORDINATE AND SYNCHRONIZE CURRENT ARFOR AVIATION AND DEEP ATTACK (AIRBORNE, AIR ASSAULT, ATTACK AVIATION) OPERATIONS WITH THE BCD ASM AND JAOC COMBAT OPERATIONS.

- MCS receives operations order/fragmentary order (OPORD/FRAGO) defining mission information (timeline, route, target location) from ARFOR G3.
- *[BCD Operations coordinates ARFOR deep missions with CCO face-to-face.]*
- AFATDS receives ACM requests from ARFOR A2C2. *[If ARFOR A2C2 doesn't own AFATDS, another ARFOR AFATDS must be used when available.]*
- BCD Operations personnel (air corridors) build ARFOR ACMs in ADS. *['No digital interface between AFATDS and CTAPS ADS. ²BCD ASM must convert ACM grids from UTM to LAT/LONG and manually input into CTAPS.]*

- CTAPS ADS checks ARFOR ACMs for conflicts identifies what agency controls any conflicting ACMs. *[The JAOC and BCD ASM coordinates manually with the agency.]*
- AFATDS transmits approval of ACMs via "hand-shake" message to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, another ARFOR AFATDS must be used when available.]*

OPS-14. COORDINATE WITH PSYOP PLANNERS IN THE INTEGRATION OF LEAFLET DROPS AND COMMANDO SOLO BROADCASTS INTO THE ATO CYCLE.

Manual Task

OPS-15. DECONFLICT PROPOSED ATO MISSION CHANGES BEYOND THE FSCL WITH FRIENDLY FORCES (FOR EXAMPLE SPECIAL OPERATIONS FORCES (SOF)) FORWARD OF THE FORWARD LINE OF OWN TROOPS (FLOT) AND WITH RESTRICTIVE FSCMs (PROTECTED AND RESTRICTED TARGETS).

Manual Task

IV.   POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare the devices for redeployment:

- Backup all system files.
- Purge all un-needed classified files.
- Power-down.
- Turn in the hard drive, classified diskettes and tapes to the BCD Security Manager.
- Place all hardware and software in shipping containers.

V.   POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare the devices for sustainment training and future combat operations:

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems (reset IP addresses, if necessary).
- Ping other BCD systems once all are on-line.

Chapter 3

Plans

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare the device for operations in theater and for shipping.

- Digital maps and map overlays for the area of operations received from the ARFOR G3.
- Databases with friendly unit designations, UICs and locations received from the ARFOR G3.
- IP addresses for BCD, JAOC, and ARFOR counterpart devices.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure devices for operations and verify connectivity with all agencies (BCD, JAOC, and ARFOR).

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems (reset IP addresses, if necessary).
- Ping other BCD systems once all are on-line.
- Set-up onto the JAOC LAN.
- Login/Addressing/Affiliation.
- Operational checks.

III. OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets *[ ]*, and suggested workarounds in parentheses ( )*:*

PLN-1. OBTAIN AS APPROPRIATE FROM THE ARFOR G3 AIR AND PLANS SECTION THE FOLLOWING:

PLN-1A. Operational plans (OPLAN) and Operations orders (OPORDs).

- AFATDS receives OPLANs by free text message (S302) from the ARFOR G3.
- GCCS-Army receives OPLANs by E-mail, GCCS-Army NewsGroups, or Homepages (MS Ofice products). The interface with MCS results in the OPORD product.

PLN-1B. Overlays.

- MCS receives overlays for future plans.
- AFATDS receives future fire support (24-96 hours) friendly graphics message (S201) from the DOCC. Within the BCD, AFATDS provides the graphics to ASAS-RWS, AMDWS, and MCS.
- GCCS-Army receives future (24-96 hours) friendly graphics from the ARFOR GCCS-Army. [¹Graphics are not provided to other systems by GCCS-Army. ²Graphics do not narrow as zoom is increased.]

PLN-1C. 24-96 hour projections of the Commander Army Forces (COMARFOR) concept of operation, targeting priorities, and target nominations for AI, close air support (CAS), RECCE, and EW.

- GCCS-Army receives OPORDs by E-mail, GCCS-Army NewsGroups, or MCS interface from the ARFOR G3.
- AFATDS receives OPORDs by free text message (S302) from ARFOR G3.
- AFATDS and GCCS-Army receive projected CAS requests by free text message (S302) from the DOCC.
- GCCS-Army receives ARFOR targeting guidance, ARFOR EW priorities, ARFOR priorities of fires, and COMARFOR RECCE requests by PowerPoint briefing charts that are E-mailed, posted to a homepage, or FTP to the BCD from the ARFOR.
- GCCS-Army receives ARFOR targeting guidance by free text message (S302) from the DOCC.
- GCCS-Army receives ARFOR EW priorities by free text message (S302) from the DOCC.
- AFATDS and GCCS-Army receive ARFOR priorities of fires by free text message (S302) from the DOCC.
- GCCS-Army receives COMARFOR RECCE requests by free text message (S302) from the DOCC.
- AFATDS receives ARFOR prioritized AI, EW, and preplanned CAS/ Joint Air Attack Team (JAAT) by free text message (S302) from the DOCC.
- AFATDS receives future Fire Support (24-96 hours) friendly graphics message (S201) from the DOCC. Within the BCD, AFATDS provides the graphics to ASAS-RWS, AMDWS, and MCS. [AMDWS receives graphics as text, not as a graphic.]
- GCCS-Army receives future (24-96 hours) friendly graphics from the ARFOR GCCS-Army. [¹Graphics are not provided to other systems by GCCS-Army. ²Graphics do not narrow as zoom is increased.]
- GCCS-Army can display the current common SITMAP of current friendly/enemy locations, and ATO targets and target nominations as a COP. Picture is automatically updated. [¹Enemy locations are

AIR and MISSILE DEFENSE WORKSTATION (AMDWS).

AMDWS is the Army Air Defense common automated system from battery through echelons above corps (EAC). AMDWS displays the air picture, ground forces, naval forces, battlefield geometry, and air defense system coverage. Displayed in real-time, the air picture includes air breathers, unmanned aerial vehicles/cruise missiles, and tactical ballistic missiles (TBM). Air defense system coverage includes air defense artillery (ADA) unit positioning with sensor and weapon system coverage as received from the Army Air and Missile Defense Command (AAMDC).

TBM launch point, projected impact area, and flight path are displayed in real-time. If requested by the JFACC through the JAOC TBM Cell, AMDWS can send a call for fire for ATACMS against a TBM target to AFATDS for execution.

CONTINGENCY THEATER AUTOMATED PLANNING SYSTEM (CTAPS).

CTAPS is currently in use by the Air Force, Navy, and Marine Corps for construction, dissemination, and execution of the ATO and Airspace Control Order (ACO). CTAPS interfaces with AFATDS in support of production of the ATO. The JAOC provides CTAPS to the BCD during deployments.

COMMAND AND CONTROL INFORMATION PROCESSING SYSTEM (C2IPS).

C2IPS is the USAF C4I system used by the Airlift Coordination Cell (ALCC) within the JAOC. The system manages the request and execution of in theater airlift requests. C2IPS receives airlift requests (AIRLIFTREQ) from the Joint Movement Control Center (JMCC) and tracks their status. BCD Airlift Section colocates with the JAOC's ALCC and has access to the information within C2IPS to track ARFOR airlift requests from submission through execution. The C2IPS is not a part of the BCD digitization architecture.

AIR DEFENSE SYSTEM INTEGRATOR (ADSI).

ADSI is a general-purpose interface system that can resolve many data-link and radar interface requirements. Within the BCD, the ADSI sends the near-real-time air picture through Tactical Digital Information Link (TADIL) formats and TBM data from Tactical Information Broadcast Service (TIBS) and Tactical Related Applications (TRAP) to AMDWS. The JAOC provides the ADSI used by the BCD and is not a part of the BCD digitization architecture.

TACTICAL RECEIVE EQUIPMENT (TRE)

TRE receives and provides the ADSI with TRAP and TIBS data. The JAOC provides the TRE used by the BCD and is not part of the BCD digitization architecture.

updated as determined by the Intelligence Staff through ASAS-RWS.
[2]Target nominations must be manually entered for display.]

PLN-2. 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.

- AFATDS sends the JAOC Alternate Target List (ATL) by free text message (S302) to the DOCC.
- AFATDS sends the JAOC approved targets/packages by free text message (S302) to the DOCC.
- AFATDS sends the JAOC EW Tactical Air Request (TAR) missions by free text message (S302) to the DOCC.
- AFATDS sends the JAOC targeting guidance and priorities by free text message (S302) to the DOCC.

PLN-3. MAINTAIN GROUND SITMAPs PORTRAYING CURRENT ENEMY SITUATION, PROJECTED FRIENDLY AND ENEMY SITUATION (24-96 HOURS) WITH SUPPORTING GRAPHICS, AND AI, CAS, RECCE, AND EW TARGET NOMINATIONS.

- AFATDS receives future Fire Support (24-96 hours) friendly graphics message (S201). Within the BCD, AFATDS provides the graphics to ASAS-RWS, AMDWS, and MCS. *[AMDWS receives graphics as text, not as a graphic.]*
- GCCS-Army receives future (24-96 hours) friendly graphics from the ARFOR GCCS-Army. *[[1]Graphics are not provided to other systems. [2]Graphics do not narrow as zoom is increased.]*
- GCCS-Army can display the current common SITMAP of current friendly/enemy locations, and target nominations as a COP. Picture is automatically updated. *[[1]Enemy locations are as determined by the Intelligence Staff through ASAS-RWS. [2]Target nominations must be manually entered for display.]*
- GCCS-Army receives OPORDs by free text message (S302), GCCS-Army NewsGroups, or MCS interface from the ARFOR G3. AFATDS receives OPORDs by free text message (S302) from DOCC.
- CTAPS sorts the ATO by fields (TOT, Army Request Number, etc.) to facilitate 8 and 4-hour validation tracking. *[Operator copies desired sorts into an ASCII file and prints list on PC.]*
- ASAS-RWS queries intelligence database for current target locations. *[ASAS-RWS updates the units as determined by the Intelligence Staff.]*

- GCCS-Army receives enemy locations (S309) from ASAS-RWS. Locations are automatically updated.

PLN-4. COORDINATE WITH BCD ASM ON OPERATIONS 24-96 HOURS OUT AND THEIR IMPACT ON CURRENT AND PLANNED ACM.

- GCCS-Army provides situational awareness for operational planning and analysis.
- GCCS-Army and AFATDS provide battlefield geometry and grid determination to assist in airspace clearance requirements. *[GCCS-Army battlefield geometry graphics do not narrow as zoom is increased.]*
- *[CTAPS ADS is used for manual input of Army requirements for airspace into the ATO/ACO cycle.]*

PLN-5. COORDINATE PLANNED ATACMS MISSIONS WITH THE JAOC COMBAT PLANS SECTION AND THE BCD AIRSPACE MANAGEMENT SECTION.

- AFATDS receives ATACMS launch request notification from ARFOR DOCC.
- AFATDS receives ACM requests from ARFOR Army Airspace Command and Control (A2C2). *[If ARFOR A2C2 doesn't have AFATDS, another ARFOR AFATDS must be used when available.]*
- ARFOR ACM requests (ROZ at PAH and TAH) are passed to the JAOC Airspace Management Section and they are built into the CTAPS airspace deconfliction system (ADS). *[[1]No digital interface between AFATDS and CTAPS ADS. [2]BCD ASM must convert ACM grids from Universal Transverse Mercator (UTM) to latitude/longitude (LAT/LONG) and manually input into CTAPS.]*
- CTAPS ADS checks ARFOR ACMs for conflicts identifies what agency controls any conflicting ACMs. *[The JAOC and BCD ASM coordinates manually with the agency.]*
- *[BCD Operations coordinates and deconflicts the ATACMS launch request with Combat Operations.]*
- AFATDS transmits approval of ACMs via "hand-shake" message to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, another ARFOR AFATDS must be used when available.]*

PLN-6. PASS PROJECTED JFACC REQUESTS FOR ATACMS AND OTHER FIRE SUPPORT TO THE COMARFOR.

- AFATDS sends ATACMS and other Army fire support target nominations to the DOCC by CFF message. TBM target nominations

may be initiated through BCD Air Defense or other agencies, as appropriate.

PLN-7. INFORM JAOC PLANS OF ARFOR AVIATION OPERATIONS.

- AFATDS receives Army aviation deep attack information (target location, TOT, flight corridors) to be included into ATO/Air Coordination Order (ACO). Army Aviation missions planned after ATO/ACO productions are transferred to BCD Operations for coordination.
- [CTAPS ADS is used for manual input of Army requirements for airspace into the ATO/ACO cycle.]

PLN-8. ENSURE ARFOR TARGET NOMINATIONS ARE SUBMITTED WITHIN TIMELINES OF THE ESTABLISHED ATO PLANNING CYCLE.

- AFATDS receives ASRs by D670 from ARFOR DOCC.
- BCD Plans CTAPS receives E-mail ASRs from AFATDS reviews ASRs and forwards ASRs via E-mail to JAOC RAAP operator who manually inputs data.
- CTAPS transmits approved ATOCONF and ACO to AFATDS using E-mail.
- AFATDS creates and displays an ASC and UTARL based upon comparison of Tactical Air Request List (TARL) and ATO.
- AFATDS transmits ATO message to all ARFOR AFATDS. ARFOR AFATDS creates ASC and UTARL at that echelon.
- AFATDS receives changes to land force targets and priorities by free text message (S302) from the DOCC.

PLN-9. ENSURE ARFOR TARGET NOMINATIONS ARE DECONFLICTED THROUGHOUT THE ATO PLANNING PROCESS.

Manual tasks performed by BCD Plans during Guidance, Apportionment, and Targeting (GAT). ASR printout from AFATDS as a working document for deconfliction at working groups.

PLN-10. REPRESENT ARFOR INTERESTS DURING GAT AND MASTER AIR ATTACK PLANS (MAAP) MEETINGS WITH THE COMBAT PLANS AND INTELLIGENCE SECTIONS OF THE JAOC. PROVIDE FEEDBACK TO THE ARFOR ON TARGET NOMINATIONS APPROVED FOR ATO PLANNING.

- AFATDS receives candidate target list (CTL) by free text message (S302) from ARFOR DOCC and prints CTLs for BCD representatives at the GAT.

- AFATDS transmits approved target nominations to DOCC by free text message (S302).

PLN-11. BRIEF THE JFACC AND THE COMBAT PLANS AND INTELLIGENCE SECTIONS DURING THE GAT AND MAAP MEETINGS.

PLN-11A. Brief current and projected enemy situation.

- ASAS-RWS automatically provides enemy situation updates. *[BCD Intelligence prepares slides for GAT and MAAP briefs via PowerPoint on PC.]*

PLN-11B. Brief current and projected friendly situation.

- GCCS-Army receives OPORDs by E-mail, GCCS-Army NewsGroups, or MCS interface from the ARFOR G3.
- AFATDS receives OPORDs by free text message (S302) from ARFOR G3.
- AFATDS receives the target list by E-mail from the DOCC. AFATDS can send target status and approved target nominations to the DOCC by E-mail.
- *[BCD Plans prepares slides for GAT and MAAP briefs via PowerPoint on PC.]*

PLN-11C. Brief ARFOR'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.

- GCCS-Army receives OPORDs by E-mail, GCCS-Army NewsGroups, or MCS interface from the ARFOR G3.
- AFATDS receives OPORDs by free text message (S302) from ARFOR G3.
- MCS receives OPORDs and OPLANs.
- GCCS-Army displays the current common SITMAP of current friendly/enemy locations, and target nominations as a COP. Picture is automatically updated. *[[1]Enemy locations are updated as determined by the Intelligence Staff through ASAS-RWS. [2]Target nominations must be manually entered for display.]*
- *[PowerPoint not available on AFATDS or ASAS-RWS. (Use PowerPoint on GCCS-Army, MCS, or PC.)]*
- AFATDS receives COMARFOR prioritized AI, EW, and preplanned CAS/JAAT by free text message (S302) from the DOCC.
- AFATDS receives the CTL via free text message (S302) from the DOCC AFATDS. AFATDS sends target status and approved target nominations to the DOCC via free text message (S302).
- AFATDS receives Fire Support battlefield geometry (S201) from the DOCC.

PLN-12. GIVE GLOs AND OTHER BCD SECTIONS INFORMATION ON COMARFOR'S PLANNED OPERATIONS.

- GCCS-Army receives OPORDs by E-mail, GCCS-Army NewsGroups, or MCS interface from the ARFOR G3.
- AFATDS receives OPORDs by free text message (S302) from ARFOR G3.

IV. POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare the devices for redeployment:

- Backup all system files.
- Purge all un-needed classified files.
- Power-down.
- Turn in the hard drive, classified diskettes and tapes to the BCD Security Manager.
- Place all hardware and software in shipping containers.

V. POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare the device for sustainment training and future combat operations:

- Inventory shipped equipment.
- Perform operational checks.
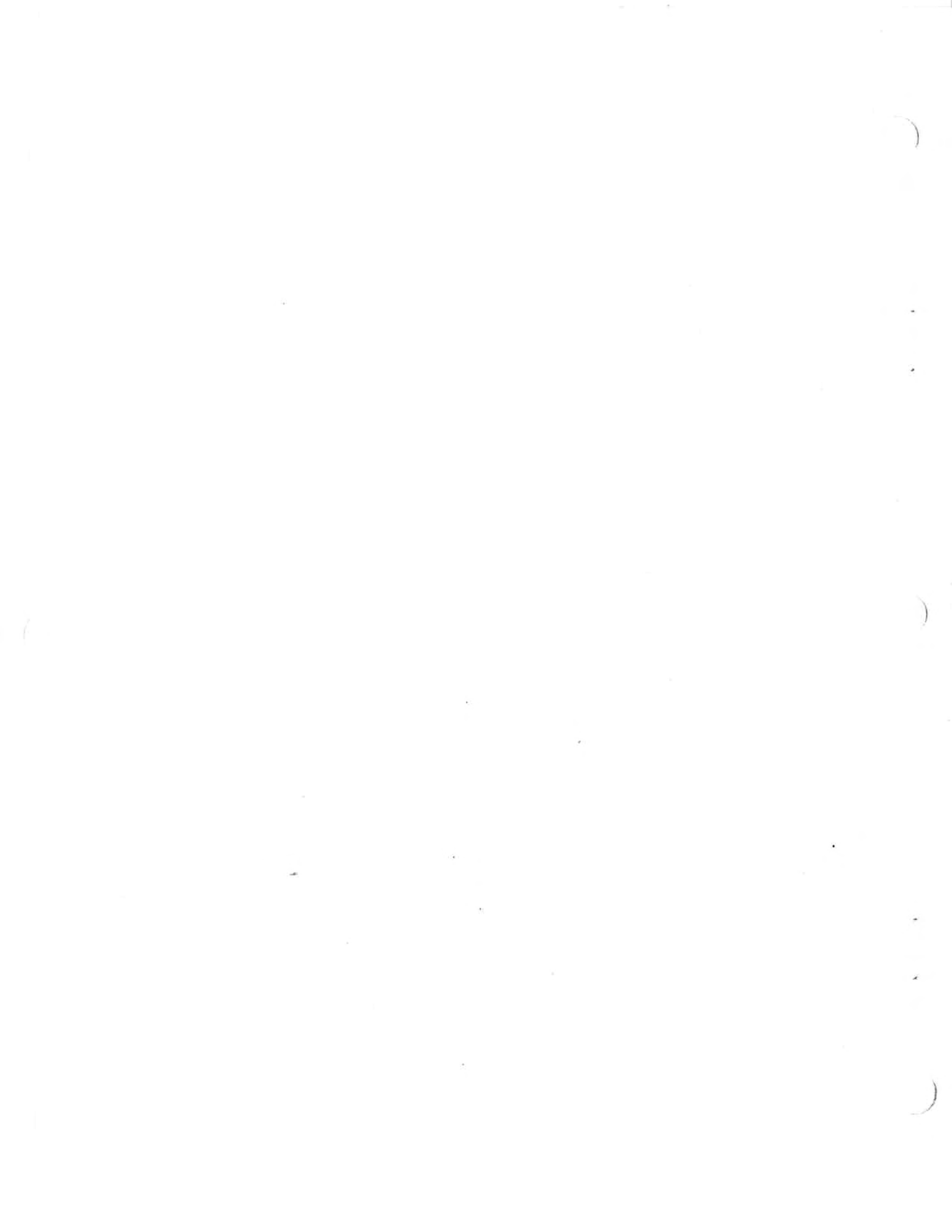
Chapter 4

Intelligence

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare device for operations in theater and for shipping.

- Load the digital map of the area of operation on both ASAS-RWS devices received from ARFOR G-2.
- Load IP addresses on both ASAS-RWS devices received from the ARFOR G-2.
- Load the ACE All Source Analysis System-All Source (ASAS-AS) IP address on both ASAS-RWS devices from the ARFOR ACE.
- Load the initial External Database Coordination (EDC) for units, facilities, and equipment along with any military intelligence integrated data system/integrated database (MIIDS/IDB) updates prior to packing both ASAS-RWS devices from the ARFOR ACE.

NOTE: Must back-up, then "flush" SITMAP, INSTAL, EQUIP, ECHELON_NAMES, and ROLE_NAMES before receiving the EDC.

- Normalize system symbology after loading the initialization EDCs.
- Load ARFOR digital map overlays on both ASAS-RWS devices received via S201 Battlefield Geometry message (the message cannot be parsed) from MCS, GCCS-Army, or AFATDS. Load IP addresses of BCD automation equipment received from the BCD System Manager.
- Create digital intelligence templates for projected enemy units based upon received information.
- Build web page for dissemination of products.

NOTE: Capability for Version 2 software. Will allow GLOs and ARFOR G-2/ACE to pull products.

- Enter UICs for all ARFOR units and receive an initial S507L Friendly Unit Locations message (the message cannot be parsed) from either MCS or GCCS-Army.
- Submit requests for Air or Air Defense Intelligence to the JAOC's Numbered Air Force.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure ASAS-RWS for operations and verify connectivity with all agencies (BCD, JAOC, and ARFOR):

- Inspect systems for obvious damage during shipping.

- Connect systems to internal LAN.
- Power-up and initialize systems (reset IP addresses, if necessary).
- Ping other BCD systems once all are on-line.
- Coordinate with the JAOC System Administrator personnel to have all mission reports (MISREP), tactical electronic intelligence (TACELINT), intelligence summaries (INTSUM), and daily intelligence summaries (DISUM) messages addressed and sent electronically to the ASAS-RWS.

NOTE: ASAS-RWS does not parse MISREPs or the INTSUM/DISUM but can manipulate them and forward them electronically if received on the ASAS-RWS.

- Get and load Domain Net Server (DNS) information from JAOC server personnel to access uniform resource locators (URL) that are plain text IPs instead of numeric IPs.
- Set-up onto the JAOC LAN.
- Log-in/Addressing/Affiliation.
- Operational checks.
- Ping other systems.
- Coordinate with JAOC Intel analysis cell on overall ground picture.
- Establish what reports JAOC analysis receives that the BCD requires.
- Determine what reports/products the JAOC Intel Analysis Cell produces and coordinate on review procedures for BCD input.
- Determine how/when messages will be passed with the JAOC Intel Analysis Cell.
- Establish critical and time sensitive information and the procedures for passing information from the JAOC analysis cell to the BCD.

III. OPERATIONAL TASKS (OPERATIONS INTELLIGENCE SECTION).

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets [ ], and suggested workarounds in parentheses ( ) :

INT/O-1. SUPPORT BCD OPERATIONS IN TARGET VALIDATION AND REFINEMENT (USUALLY 8 AND 4 HOURS BEFORE TIME ON TARGET) FOR ALL MISSIONS SUPPORTING THE ARFOR.

INT/O-1A. Receive and disseminate significant intelligence activities.

- ASAS-RWS retrieves this information from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded US Message Text Format (USMTF) message.
- ASAS-RWS can send this information to other ABCS devices using INTELINK-S's mail tool. *[Since the ARFOR G-2 Home Page is not set up in USMTF message format, the ASAS-RWS must cut/paste or retype the message in S302 form.]*

INT/O-1B. Receive spot reports.

- ASAS-RWS retrieves this information from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- This information is printed using the INTELINK-S Print Tools and is available for review.

INT/O-1C. Receive ARFOR intelligence reports.

- ASAS-RWS retrieves this information from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- This information may be sent to other ABCS devices using the INTELINK-S Mail Tool. *[Since the ARFOR G-2 Home Page is not set up in USMTF message format, the ASAS-RWS must use S302 message to send this information to other ABCS devices, requiring cut/paste or retyping in the required format.]*

INT/O-1D. Receive and report JAOC INTSUMs.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS. (This information may be found on the BCD Operations GCCS-Army in the Newsgroups.)]*
- ASAS-RWS sends the JAOC INTSUMs to ARFOR ACE and ARFOR G-2 Intelligence using INTELINK-S file transfer protocol (FTP). *[Information must be manually input from written media.]*

INT/O-1E. Receive and report significant Combat Operations Intelligence Division (COID) intelligence activities.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*
- ASAS-RWS can send the JAOC COID intelligence activities to ARFOR ACE, ARFOR G-2 Intelligence, and BCD Future Intelligence using INTELINK-S FTP. *[Information must be manually input from written media.]*

INT/O-1F. Receive and disseminate in-flight MISREPs.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*
- ASAS-RWS can send the JAOC COID intelligence activities to ARFOR ACE and ARFOR G-2 Intelligence using INTELINK-S FTP. *[Information must be manually input from written media.]*

INT/O-1G. Receive ARFOR INTSUMs.

- ASAS-RWS retrieves this information from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- This information is printed using the INTELINK-S Print Tools and is available for review.

INT/O-1H. Receive enemy capabilities advice.

- ASAS-RWS receives from ARFOR ACE by Deployable Intelligence Support Element (DISE), ARFOR Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- This information is printed using the INTELINK-S Print Tools and is available for review.

INT/O-1I. Receive and distribute ARFOR INTSUM/DISUM analysis and briefing.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE. ASAS-RWS retrieves this information from ARFOR Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette- make 2 copies; one for Plans and one for Operations. *[ASAS-RWS is not able to print, view, or modify these slides. ([1]Use PC/laptop to print information. [2]This information may be found on the BCD Operations Section GCCS-Army in the Newsgroups.)]*

INT/O-1J. Receive and assess ARFOR targets.

- ASAS-RWS retrieves overlay from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- FTP Overlay. (ACE may make overlay and post on secure intelligence web page or Current Intelligence may have to make it. In either case, the overlay must also be placed on the map on the wall.)

INT/O-1K. Send requests for target validation.

- ASAS-RWS sends requests to ARFOR ACE and ARFOR G-2 Intelligence using message traffic and FTP.

INT/O-1L. Report status of target validation.

- ASAS-RWS receives target validations from ARFOR G-3 DOCC via FTP or free text message (S302).

INT/O-2. SUPPORT BCD OPERATIONS COORDINATION WITH THE JAOC COMBAT OPERATIONS DIVISION ON ARFOR IMMEDIATE REQUESTS.

Manual Task

INT/O-3. RELAY REAL-TIME SIGNIFICANT INTELLIGENCE INFORMATION RECEIVED BY JOINT SURVEILLANCE AND TARGET ACQUISITION RADAR SYSTEM (J-STARS), GUARDRAIL, U-2S, UNMANNED AERIAL VEHICLE (UAV), AND OTHER COLLECTION PLATFORMS.

INT/O-3A. Receive and report significant COID intelligence activities.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*
- ASAS-RWS receives the information and sends the JOAC COID intelligence activities to ARFOR ACE, ARFOR G-2 Intelligence, and BCD Future Intelligence using INTELINK-S FTP and message traffic. *[Information must be manually input from written media.]*

INT/O-3B. Receive and report Air Force INTSUMs.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS].* (This information may be found on the BCD Operations GCCS-Army in the Newsgroups.)*
- ASAS-RWS receives the information and sends the JAOC INTSUMs to ARFOR ACE and ARFOR G-2 Intelligence using INTELINK-S FTP. *[Information must be manually input from written media.]*

INT/O-3C. Receive and disseminate MISREPs.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS].*
- ASAS-RWS receives the information and sends the JAOC COID intelligence activities to ARFOR ACE and ARFOR G-2 Intelligence using INTELINK-S FTP. *[Information must be manually input from written media.]*

INT/O-4. COORDINATE EMERGING TARGETS INFORMATION WITH THE ARFOR TOC AND VALIDATE THEM FOR IMMEDIATE DIVERTS. KEEP BCD OPERATIONS INFORMED OF THE TARGETS.

INT/O-4A. Relay intelligence data to support diverts/retargeting.

- ASAS-RWS receives data from ARFOR ACE using INTELINK-S FTP and message traffic.
- ASAS-RWS prints hard copy for BCD Operations.

INT/O-4B. Receive and report Air Force INTSUMs.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.* (This information may be found on the BCD Operations GCCS-Army in the Newsgroups.)*]*
- ASAS-RWS sends the JAOC INTSUMs to ARFOR ACE and ARFOR G-2 Intelligence using INTELINK-S FTP and message traffic. *[Information must be manually input from written media.]*

INT/O-4C. Receive and distribute ARFOR INTSUM/DISUM analysis and briefing.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE. ASAS-RWS retrieves this information from ARFOR Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette- make 2 copies; one for Plans and one for Operations. *[ASAS-RWS does not print, view, or modify these slides.* ([1]*Use PC/laptop to print information.* [2]*This information may be found on the BCD Operations Section GCCS-Army in the Newsgroups.)]*

INT/O-4D. Relay status of diverts.

- ASAS-RWS transmits data to ARFOR ACE using INTELINK-S FTP and message traffic.

INT/O-4E. Send requests for target validation.

- ASAS-RWS sends requests to ARFOR ACE and ARFOR G-2 Intelligence using FTP.

INT/O-4F. Report status of target validation.

- ASAS-RWS transmits data to ARFOR ACE using INTELINK-S FTP and message traffic.

INT/O-5. GET THE MOST CURRENT ENEMY GROUND FORCE SITUATION FROM THE ARFOR G2 OPERATIONS SECTION.

INT/O-5A. Receive and disseminate significant intelligence activities.

- ASAS-RWS retrieves this information from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.

- ASAS-RWS can send this information to other ABCS devices using INTELINK-S's mail tool. *[Since the ARFOR G-2 Home Page is not set up in USMTF message format, the ASAS-RWS must cut/paste or retype the message in S302 form.]*

INT/O-5B. Receive spot reports.

- ASAS-RWS retrieves spot reports from ARFOR G-2 Intelligence Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- The Spot Reports are printed using the INTELINK-S Print Tools and is available for review by the Intelligence Section.

INT/O-5C. Receive ARFOR intelligence reports.

- Receives intelligence reports on the Home Page using a net browser such as NETSCAPE/MOSAIC or by forwarded USMTF message.
- The intelligence reports may be sent to other ABCS devices using the INTELINK-S Mail Tool. *[Since the ARFOR G-2 Home Page is not set up in USMTF message format, the ASAS-RWS must use S302 message to send this information to other ABCS devices, requiring cut/paste or retyping in the required format.]*

INT/O-5D. Receive and plot enemy SITMAP updates.

- ASAS-RWS can receive EDC from the ARFOR ACE.
- ASAS-RWS requires an EDC from ARFOR ASAS-AS to generate an S309 message for other BCD ABCS devices.
- ASAS-RWS in BCD Operations disseminates the S309 message to BCD MCS for forwarding to other BCD devices.

INT/O-5E. Exchange of enemy front line trace.

- ASAS-RWS receives overlay from BCD Operations AFATDS in S201 message. *[ASAS-RWS cannot parse the S201 message received from AFATDS.]*
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/O-5F. Receive and distribute briefings on Command, Control, and Communications (C3) nodes and enemy strengths.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on a 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. ([1]Use PC/laptop to print. [2]A hardcopy is taken to JAOC Combat Intelligence Division (CID)).]*

INT/O-5G. Receive and relay BDA.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

- ASAS-RWS sends BDA for air strikes to ARFOR ACE and BCD Plans Intelligence using INTELINK-S FTP and message traffic. *[The information must be typed into the device.]*
- ASAS-RWS receives ARFOR ACE BDA information using INTELINK-S FTP.
- ASAS-RWS sends ARFOR BDA to BCD Plans Intelligence using INTELINK-S FTP and message traffic.
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

IV. OPERATIONAL TASKS (PLANS INTELLIGENCE SECTION).

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets *[ ]*, and suggested workarounds in parentheses ( ) :

INT/P-1. INTERPRET THE ENEMY GROUND FORCES SITUATION (MAINTAIN CURRENT ENEMY SITMAP), INFORM BCD OPERATIONS AND BCD PLANS OF APPARENT CHANGES IN ENEMY OPERATIONS, OBJECTIVES, AND PRIORITIES.

INT/P-1A. Receive and plot enemy SITMAP updates.
- ASAS-RWS can receive EDC from the ARFOR ACE.
- ASAS-RWS requires an EDC from ARFOR ASAS-AS to generate an S309 message for other BCD ABCS devices.
- ASAS-RWS in BCD Operations disseminates the S309 message to BCD MCS for forwarding to other BCD devices.

INT/P-1B. Receive and brief ARFOR INTSUM/DISUM analysis and briefing.
- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-1C. Relay Enemy Ground Order of Battle (GOB) including units and locations.
- ASAS-RWS receives enemy GOB from ARFOR ACE in an updated EDC. *[ASAS-RWS does not relay this information to the USAF CID digitally.]*
- ASAS-RWS requires an EDC from ARFOR ASAS-AS to generate an S309 message for other BCD ABCS devices.
- ASAS-RWS in BCD Operations disseminates the S309 message to BCD MCS for forwarding to other BCD devices.

INT/P-1D. Receive enemy GOB updates for BCD Plans briefings.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-1E. Plot SITMAP displays.

- ASAS-RWS receives SITMAP displays from ARFOR G-2 Intelligence or ARFOR ACE using message traffic.
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/P-2. PROCESS MISREPs AND OTHER BDA. FORWARD BDA INFORMATION TO ANSWER COMBAT ASSESSMENT AND BDA QUESTIONS.

INT/P-2A. Receive and relay BDA.

- *ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. [CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*
- ASAS-RWS sends BDA for air strikes to ARFOR ACE and BCD Plans Intelligence using INTELINK-S FTP and message traffic. *[The information must be typed into the device.]*
- ASAS-RWS receives ARFOR ACE BDA information using INTELINK-S FTP and message traffic.
- ASAS-RWS sends ARFOR BDA to BCD Plans Intelligence using INTELINK-S FTP and message traffic.
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/P-3. INTEGRATE COMARFOR REQUIREMENTS FOR INTELLIGENCE COLLECTION AND EW WITH JFACC REQUIREMENTS.

INT/P-3A. Receive ARFOR intelligence annexes and estimates.

- ASAS-RWS retrieves intelligence annexes and estimates from ARFOR Home Pages using a net browser such as NETSCAPE/MOSAIC.

INT/P-3B. Receive and post ARFOR Priority Intelligence Requirements (PIR) and priorities.

- ASAS-RWS receives PowerPoint slide file from ARFOR G-2 Intelligence using INTELINK-S FTP.

- ASAS-RWS puts PowerPoint slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-3C. Receive and distribute ARFOR collection requirements that can be satisfied by Air Force assets.

- ASAS-RWS receives collection requirements from ARFOR G-2 Intelligence using INTELINK-S FTP.
- ASAS-RWS sends file to printer for hardcopy.
- ASAS-RWS sends to other ABCS using INTELINK-S, if other systems have INTELINK-S capability.   (If no INTELINK-S capability, the message can be cut/pasted into S302 message and sent.)
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS].*

INT/P-3D. Relay USAF Electronic Preparation of the Battlefield (EPB).

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*
- ASAS-RWS sends updates to ARFOR G-2 Intelligence and ARFOR ACE using INTELINK-S FTP and message traffic. *[ASAS-RWS operator may manually enter the information.]*

INT/P-4. GET THE PIRs, COLLECTION PLAN, TARGETING DATA, 24-96 HOUR ENEMY SITUATION PROJECTION, AND NOMINATIONS FOR RECCE AND INTELLIGENCE EW SUPPORT FROM ARFOR G-2 PLANS SECTION.

INT/P-4A. Receive ARFOR intelligence annexes and estimates.

- ASAS-RWS retrieves intelligence annexes and estimates from ARFOR Home Pages using a net browser such as NETSCAPE/MOSAIC.

INT/P-4B. Receive and post ARFOR PIR and priorities.

- ASAS-RWS receives PowerPoint slide file from ARFOR G-2 Intelligence using INTELINK-S FTP and message traffic.
- ASAS-RWS puts PowerPoint slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-4C. Receive and distribute ARFOR collection requirements that can be satisfied by Air Force assets.

- ASAS-RWS receives collection requirements from ARFOR G-2 Intelligence using INTELINK-S FTP.
- ASAS-RWS sends file to printer for hardcopy.

- ASAS-RWS sends to other ABCS using INTELINK-S, if other systems have INTELINK-S capability. (If no INTELINK-S capability exists, the message can be cut/pasted into S302 message and sent.)
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/P-4D. Receive and brief ARFOR INTSUM/DISUM analysis and briefing.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-5. SUPPORT THE BCD PLANS BY MAINTAINING GROUND SITMAPs OF CURRENT AND PROJECTED ENEMY SITUATIONS (24-96 HOURS) WITH SUPPORTING GRAPHICS, RECCE, AND EW TARGET NOMINATIONS.

INT/P-5A. Plot SITMAP displays.

- ASAS-RWS receives SITMAP displays from ARFOR G-2 Intelligence or ARFOR ACE using message traffic.
- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/P-5B. Receive and plot enemy SITMAP updates.

- ASAS-RWS can receive EDC from the ARFOR ACE.
- ASAS-RWS requires an EDC from ARFOR ASAS-AS to generate an S309 message for other BCD ABCS devices.
- ASAS-RWS in BCD Operations disseminates the S309 message to BCD MCS for forwarding to other BCD devices.

INT/P-6. SUPPORT BCD PLANS BRIEFINGS TO THE JAOC STAFF ON THE CURRENT AND PROJECTED ENEMY SITUATION.

INT/P-6A. Receive ARFOR intelligence annexes and estimates.

- ASAS-RWS retrieves intelligence annexes and estimates from ARFOR Home Pages using a net browser such as NETSCAPE/MOSAIC.

INT/P-6B. Receive and disseminate significant JAOC intelligence reports, estimates, and mission reports.

- ASAS-RWS can receive E-mail and can use the UNIX Talk Utility to "chat" with CTAPS. *[CTAPS must initiate the "chat". ASAS-RWS does not use X-CHAT to chat with CTAPS.]*

INT/P-6C. Receive and brief ARFOR INTSUM/DISUM analysis and briefing.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-6D. Receive enemy GOB updates for BCD Plans briefings.

- ASAS-RWS receives PowerPoint briefing slide file from ARFOR ACE using INTELINK-S FTP.
- ASAS-RWS puts PowerPoint briefing slide file on 3.5" floppy diskette. *[ASAS-RWS does not print, view, or modify these PowerPoint slides. (Use PC/laptop to print.)]*

INT/P-6E. Exchange of enemy front line trace.

- ASAS-RWS receives overlay from BCD Operations AFATDS in S201 message. *[ASAS-RWS cannot parse the S201 message received from AFATDS.]*

V. POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare the devices for redeployment:

- Backup all system files.
- Purge all un-needed classified files.
- Power-down.
- Turn in the hard drive, classified diskettes and tapes to the BCD Security Manager.
- Place all hardware and software in shipping containers.

VI. POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare the device for sustainment training and future combat operations:

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems.
- Ping other BCD systems once all are on-line.

Chapter 5

Air Defense

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare the device for operation in theater and for shipping:

- Load digital operational Air Defense (AD) maps into the AMDWS.
- Plot location and orientation of air defense assets received from ARFOR G3. In theater, this information is available via data link from AAMDC and/or ARFOR ADE
- Plot location of ATACMS capable units received from ARFOR G3.
- Load IP addresses of BCD automation equipment received from BCD System Manager.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure the device for operations and verify connectivity with all agencies (BCD, JAOC, AAMDC, and ARFOR).

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems.
- Ping other BCD systems, once all are on-line.
- Set up onto the BCD LAN/JAOC wide area network (WAN).
- Perform log-in/addressing/affiliation.
- Perform operational checks with BCD systems, AAMDC, ARFOR systems, and JAOC systems.
- Input or transfer from another AMDWS the unit task organization.

III. OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets *[ ]*, and suggested workarounds in parentheses *( )* :

ADA-1. COORDINATE WITH THE ARFOR AIR DEFENSE ELEMENT (ADE) AND/OR THE AAMDC THEATER ARMY AIR DEFENSE ELEMENT (TAADE) FOR THE FOLLOWING:

ADA-1A. Location of ADA assets.

- AMDWS displays friendly locations received from MCS, AFATDS, GCCS-Army, or AMDWS (507L message). AMDWS receives EAC

ADA asset locations from another AMDWS in the ADA hierarchy. The operator can filter type units displayed. Filtering can be done by "echelon" and/or "branch". External unit locations update automatically in situational awareness mode. [¹If friendly force is manually input in plan mode, it will not automatically update location. ²For the unit designation to be displayed, UICs must be input in the unit task organization (UTO) by the AMDWS operator or the unit will appear as an unknown unit. The UTO can be transferred from one AMDWS to another.]

ADA-1B. Engagement reporting.

- AMDWS receives engagement reports in free text message (S302) or MS Office application from the ARFOR ADE or AAMDC TAADE.

ADA-1C. ADA weapon engagement zones (WEZ).

- AMDWS displays ADA WEZ. [¹Engagement zones will automatically reposition with the unit if the update is received from AMDWS. ²WEZs will not update (S507L) received from AFATDS, MCS, or GCCS-Army.]

ADA-1D. Identification of friend or foe (IFF)/selective identification feature (SIF) procedures.

- AMDWS receives IFF and SIF procedures by free text message (S302) or MS Office application from the ARFOR ADE or AAMDC TAADE.

ADA-1E. Receipt of ADA annexes to OPLANS/OPORDS.

- AMDWS receives OPLANs and OPORDs free text (S302) or MS Office application from the ARFOR ADE or AAMDC TAADE.

ADA-2. ADVISE THE AREA AIR DEFENSE COMMANDER (AADC) ON ARMY AIR DEFENSE MATTERS APPROPRIATE TO DECONFLICTION OF AIR SUPPORT TO GROUND OPERATIONS.

- AMDWS displays SITMAP with ADA WEZ. Screen can be printed.

NOTE: AMDWS can send future planned missions' SITMAPS to other AMDWS. Additionally, SITMAPS can be shared between AMDWS when in client/server mode.

- AMDWS receives AD tactical operational data by free text message (S302) or MS Office application from ARFOR ADE and AAMDC TAADE.

ADA-3. COORDINATE WITH THE AAMDC THE FOLLOWING:

ADA-3A. ADA unit status.

- AMDWS passes ADA unit status by free text message (S302). The AMDWS can receive unit status from AMDWS, MCS, AFATDS, or GCCS-Army. [Initial unit status thresholds must be manually set.]

ADA-3B. Changes in AD warning.

- AMDWS passes AD warning changes by free text message (S302) or MS Office application received from JAOC Defensive Operations.

ADA-3C. Weapons control status (WCS).

- AMDWS passes WCS by free text message (S302) or MS Office application received from JAOC Defensive Operations.

ADA-3D. Rules of engagement (ROE).

- AMDWS passes ROE by free text message (S302) or MS Office application received from JAOC Combat Operations. *[The ROE is part of the ATO. The ATO is received by E-mail]*

NOTE: The ATO is not the primary resource for the ROE. The ATO may only cover parts of the ROE or discuss specific air defense procedures.

ADA-3E. Identification procedures.

- AMDWS receives IFF and SIF procedures by free text message (S302) or MS Office application from the ARFOR ADE or AAMDC TAADE.

ADA-3F. Early warning and TBM alert procedures.

- AMDWS passes the OPORD received by free text message (S302) or MS Office application from the JAOC Combat Operations Section.
- AMDWS passes the TMD SOP received by free text message (S302) or MS Office application from the JAOC Combat Operations Section.
- AMDWS passes TMD early warning matrix. *[The matrix is received by FAX, E-mail, or MS Office application from the Missile Defense Command (MDC). If it is received as a FAX, it is manually input for transmission by E-mail. The matrix is manually input for display on the AMDWS and may be sent to another AMDWS as a geometry overlay (S201 message).]*
- AMDWS passes Army TMD SOP received by free text message (S302) or MS Office application from the AAMDC TAADE.
- AMDWS displays TBM launch, flight path, estimates time of impact, and targeted area. Information is received from ADSI/AAMDC. A red launch warning light illuminates on the AMDWS when a TBM launch has been detected. *[¹There is no audio alert of a TBM launch. ²Verification of receipt of the launch must be accomplished manually.]*

ADA-4. 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.

- AMDWS receives WEZ by battlefield geometry (S201), free text message (S302), or MS Office application from ARFOR ADE or the AAMDC TAADE.

- AMDWS displays ADA WEZ. [*Engagement zones will automatically reposition with the unit if the update is received from AMDWS. *WEZs will not update (S507L) received from AFATDS, MCS, or GCCS-Army.]*
- AMDWS receives AD tactical operational data by free text message (S302) or MS Office application from ARFOR ADE, AAMDC TAADE, or the JAOC Combat Operations Squadron.
- AMDWS displays friendly locations received from MCS, AFATDS, GCCS-Army, or AMDWS (507L message). AMDWS receives EAC ADA asset locations from another AMDWS in the ADA hierarchy. The operator can filter units by "branch" and "echelon". External unit locations update automatically in situational awareness mode. [*If friendly force is manually input in plan mode, it will not automatically update location. *For the unit designation to be displayed, UICs must be input in the unit task organization (UTO) by the AMDWS operator or the unit will appear as an unknown unit. The UTO can be transferred from one AMDWS to another.]*
- AMDWS receives ADA capabilities by free text message (S302) or MS Office application from the ARFOR ADE or the AAMDC TAADE.
- AMDWS receives ADA system and missile status (gumball) automatically updated from AMDWS, MCS, AFATDS, or GCCS-Army (S507 message). *[AMDWS cannot graphically display unit status (actively radiating) or missile count.]*
- AMDWS receives changes to the ADA scheme of maneuver by free text message (S302) or MS Office application from ARFOR ADE or AAMDC TAADE.
- PowerPoint is available on AMDWS.

ADA-5. PROVIDE THE AD COMMANDER WITH THE AADC'S INTENT.

- AMDWS passes the AADC's intent by free text message (S302) or MS Office application to the ARFOR ADE and the AAMDC TAADE. *[The AADC's intent must be manually input for transmission by free text message (S302) unless electronically received.]*

ADA-6. COORDINATE WITH THE ARFOR TMD CELL FOR TBM ALERT DISSEMINATION PROCEDURES.

- AMDWS passes changes to the TMD OPORD received by free text message (S302) or MS Office application from the Combat Operations Section.
- AMDWS passes the TMD SOP received by free text message (S302) or MS Office application from the JAOC Combat Operations Section.
- AMDWS passes TMD early warning matrix. *[The matrix is received by FAX, E-mail, or MS Office application from the MDC. If it is*

received as a FAX, it is manually input for transmission by E-mail. The matrix is manually input for display on the AMDWS and may be sent to another AMDWS as a geometry overlay.]

- AMDWS passes Army TMD SOP received by free text message (S302) from the AAMDC TAADE.

- AMDWS displays TBM launch, flight path, estimates time of impact, and targeted area. Information is received from ADSI/AAMDC. A red launch warning light illuminates on the AMDWS when a TBM launch has been detected. *[¹There is no audio alert of a TBM launch. ²Verification of receipt of the launch must be accomplished manually.]*

ADA-7. EXCHANGE ADA OPERATIONAL DATA WITH JAOC COUNTERPARTS.

- AMDWS passes changes to the Airspace Control Plan (ACP) received by free text message (S302) or MS Office application from the JAOC Airspace Management Section. The ACP is passed to the ARFOR ADE and AAMDC TAADE.

- AMDWS receives AD tactical operational data by free text message (S302) or MS Office application from ARFOR ADE and AAMDC TAADE.

- AMDWS passes USAF engagement reports received in PowerPoint from JAOC Combat Operations. The USAF engagement reports are passed to the ARFOR ADE and the AAMDC TAADE in PowerPoint.

- AMDWS receives changes to the ACO by E-mail text file or MS Office application from the JAOC Airspace Management Section via CTAPS.

- AMDWS receives changes to the Operational Tasking Data Link (*OPTASKLINK*) information by free text message (S302) or MS Office application from the JAOC Combat Operations.

- AMDWS receives changes to the Air Defense Plan (ADP) by free text message (S302) or MS Office application and graphics via CTAPS from the JAOC Defensive Operations.

- AMDWS receives defensive control measures by free text message (S302) or MS Office application and graphics via CTAPS from JAOC Defensive Operations. *[If the control measure graphics are in excess of 15 points, the AMDWS will not automatically display the graphics. The graphic message must be broken into messages with graphic segments of 15 points or less to be automatically plotted.]*

- AMDWS can pass unit task organization only to another AMDWS. *[It must be manually entered.]*

ADA-8. COORDINATE ADA AIRSPACE NEEDS WITH THE JAOC AIRSPACE MANAGEMENT SECTION.

- AMDWS receives ADA airspace needs by free text message (S302) or MS Office application from ARFOR ADE and AAMDC TAADE.

[ADA airspace needs are passed by free text message (S302) to JAOC Airspace Management Section's CTAPS.]

ADA-9. SUPPORT INTEGRATION OF THE COMARFOR AD PLAN WITH THE JFACC COUNTERAIR EFFORT.

- AMDWS displays ADA WEZ. *[[1]Engagement zones will automatically reposition with the unit if the update is received from AMDWS. [2]WEZs will not update (S507L) received from AFATDS, MCS, or GCCS-Army.]*

- AMDWS displays friendly locations received from MCS, AFATDS, GCCS-Army, or AMDWS (507L message). AMDWS receives EAC ADA asset locations from another AMDWS in the ADA hierarchy. The operator can filter type unit displayed when in plan mode. External unit locations update automatically in situational awareness mode. *[[1]If friendly force is manually input in plan mode, it will not automatically update location. [2]For the unit designation to be displayed, UICs must be input in the unit task organization (UTO) by the AMDWS operator or the unit will appear as an unknown unit. The UTO can be transferred from one AMDWS to another.]*

- AMDWS receives ADA capabilities by free text message (S302) or MS Office application from the ARFOR ADE or the AAMDC TAADE.

- AMDWS receives ADA system and missile status (gumball) automatic update from AMDWS, MCS, AFATDS, or GCCS-Army. *[AMDWS cannot graphically display unit status (radiating) or missile count.]*

- AMDWS receives changes to the ADA scheme of maneuver by free text message (S302) or MS Office application from ARFOR ADE or AAMDC TAADE.

- AMDWS receives engagement reports by free text message (S302) or MS Office application from the ARFOR ADE or AAMDC TAADE.

- AMDWS receives ADA ACMs by S201 message from ARFOR ADE and AAMDC TAADE.

ADA-10. ATACMS COORDINATION.

- AMDWS displays ATACMS range fan and TBM near-real-time launch location. *[ATACMS range fan must be manually entered.]*

- AMDWS sends an ATACMS call for fire to the BCD Operations AFATDS (D210 message) against TBM targets. *[[1]If an Initial Fire Support Automated System (IFSAS) is in the automated linkage to the ATACMS launcher, the AFATDS operator at BCD Operations must change the method of fire and control to AMC/CNO (At My Command/CanNot Observe) and change the method of engagement to ATACMS Anti-Personnel Automatic Mines (APAM).]*

ADA-11. AIRCRAFT WARNINGS.

- AMDWS displays near-real-time friendly and enemy aircraft, cruise missiles, remotely piloted vehicles (RPV) and TBMs. *[The air picture is limited to a 200 mile radius centered on the site control center (SCC). There may be more than one SCC in a theater.]*

IV.   POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare the devices for redeployment:

- Backup all system files.
- Purge all un-needed classified files.
- Power-down.
- Turn in the hard drive, classified diskettes and tapes to the BCD Security Manager.
- Place all hardware and software in shipping containers.

V.   POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare the device for sustainment training and future combat operations:

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems.
- Ping other BCD systems once all are on-line.

Chapter 6

Airspace Management

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare devices for operations in theater and for shipping.

- Load AFATDS with digital maps of the area of operation received from ARFOR G3.
- Load AFATDS with digital map overlays received from ARFOR G3.
- Load AFATDS databases with friendly units' designation, UIC, and location received from ARFOR G3.
- Load AFATDS with IP addresses for BCD, JFACC, and ARFOR counterpart devices.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure devices for operations and verify connectivity with all agencies (BCD, JAOC, and ARFOR):

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems.
- Ping other BCD systems, once all are on-line.
- Set-up onto the JAOC LAN.
- Login/Addressing/Affiliation.
- Operational checks.

III. OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets *[ ]*, and suggested workarounds in parentheses ( ):

ASM-1. COORDINATE PLANNED ARFOR AIRSPACE USE REQUIREMENTS WITH THE JAOC AIRSPACE MANAGEMENT SECTIONS.

ASM-1A. Receive planned ARFOR ACM requests.

- AFATDS receives ACM requests from ARFOR A2C2. *['AFATDS recognizes a limited number of ACMs: flight corridors, ACPs (operator-defined dimensions). [2]If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]*

ASM-1B. Submit ARFOR planned ACM requests to JAOC Airspace Management for coordination and approval.

- ARFOR ACMs are manually input into the ADS by BCD ASM personnel. [¹No digital interface between AFATDS and CTAPS' ADS. ²BCD ASM Section must convert ACM grids from UTM to LAT/LONG and manually input into CTAPS.]

ASM-1C. Deconflict planned ACM requests.

- CTAPS ADS checks ARFOR ACMs for conflicts and BCD ASM personnel identify what agency controls any conflicting ACMs. [BCD ASM coordinates manually with agency.]
- AFATDS requires coordination when FSCMs and fire missions conflict with ACMs. [¹AFATDS does not recognize conflicts between ACMs. ²AFATDS does not recognize all ACMs published in the ACO; CTAPS ACMs frequently do not follow USMTF and labeling; however, the ACO USMTF baseline, scheduled for 1998, will be USMTF compliant.]

ASM-1D. Check ACO for ARFOR ACMs.

- AFATDS displays or prints the approved ACO. [¹AFATDS currently cannot parse ACO to review only ARFOR requested ACMs. ²BCD ASM must manual sort ACO to find ARFOR requests.]
- CTAPS displays or prints the approved ACO. [CTAPS cannot sort ACO to review only ARFOR requested ACMs. (Individual ARFOR ACMs may be searched for and identified.)]

ASM-1E. Provide ARFOR feedback on ACMs requested.

- AFATDS transmits ACO to ARFOR A2C2 AFATDS. [If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]
- CTAPS transmits ACO to Air Force Air Support Operations Center's (ASOC) CTAPS remotes located with the ARFOR.

ASM-2. COORDINATE IMMEDIATE (DURING ATO EXECUTION) ARFOR AIRSPACE USE REQUIREMENTS (I.E. ATACMS LAUNCH) WITH THE JAOC AIRSPACE MANAGEMENT SECTIONS.

Due to time-sensitivity of immediate ACM requests, coordination is usually conducted via telephone, FAX, and face-to-face.

ASM-2A. Receive immediate ARFOR ACM requests.

- AFATDS receives ATACMS launch request notification from ARFOR. [BCD ASM AFATDS must have "Mission Monitor" window open.]
- AFATDS (time permitting) receives ACM requests from ARFOR A2C2. [¹BCD ASM receives ATACMS PAH and TAH locations. ²If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]

ASM-2B. Submit ARFOR planned ACM requests to to JAOC Airspace Management for coordination and approval.

- ARFOR ACM requests are built into (ROZ at PAH and TAH) ADS. *[No digital interface between AFATDS and CTAPS ADS. BCD ASM must convert ACM grids from UTM to LAT/LONG and manually input into CTAPS.]*

ASM-2C. Deconflict planned ACM requests.

- CTAPS ADS checks ARFOR ACMs for conflicts and BCD ASM personnel identify what agency controls any conflicting ACMs. *[BCD ASM coordinates manually with agency.]*

ASM-2D. Provide ARFOR feedback on ACMs requested.

- AFATDS transmits approval of ACMs via "hand-shake" message to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]*

ASM-3. COORDINATE SOF AIRSPACE REQUIREMENTS WHEN DIRECTED.

Task normally performed by JAOC Special Operations Liaison Element (SOLE), not BCD ASM.

ASM-4. INTEGRATE JOINT AIRSPACE REQUIREMENTS WITH APPROPRIATE A2C2 ELEMENTS.

Use requirements in ASM-1 and ASM-2 above.

ASM-5. INTEGRATE ARFOR AIRSPACE USER ACTIVITIES WITH THE JAOC AIRSPACE PLANS.

Use requirements in ASM-1 and ASM-2 above.

ASM-6. REPRESENT COMARFOR INTERESTS IN THE DEVELOPMENT AND APPROVAL OF ACMs AND RESTRICTIONS IN THE ACO.

Use requirements in ASM-1 above.

ASM-7. ADVISE THE ACA AND BCD COMMANDER OF SIGNIFICANT ACTIVITIES WHICH AFFECT THE JOINT USE OF AIRSPACE.

ASM-7A. Maintain A2C2 SITMAP.

Manual Task.

ASM-7B. Brief ACA and BCD Commander as required.

Manual Task via PowerPoint Slides produced on PC.

ASM-8. ADVISE THE ACA AND BCD COMMANDER ON THE IMPACT OF JOINT ACMs OR RESTRICTIONS ON THE CONDUCT OF THE GROUND BATTLE.

ASM-8A. Maintain A2C2 SITMAP.

Manual Task.

ASM-8B. Brief ACA and BCD Commander as required.

Manual Task via PowerPoint Slide produced on PC.

ASM-9. COORDINATE COMARFOR REQUESTS FOR ACMs AND RESTRICTIONS TO INCLUDE EW REQUIREMENTS.

Use requirements in ASM-1 and ASM-2 above.

ASM-10 TO THE MAXIMUM EXTENT POSSIBLE, ENSURE ARMY AVIATION MISSIONS ARE INCLUDED IN THE JOINT ATO FOR THE PURPOSE OF COORDINATION. IN STABILITY AND SUPPORT OPERATIONS (SASO), ALL ROTARY WING AND FIXED WING AIRCRAFT ARE NORMALLY INCLUDED IN THE ATO. IN COMBAT OPERATIONS, SEMA AND OPERATIONAL SUPPORT AIRLIFT (OSA) WILL NORMALLY BE INCLUDED.

Use requirements in ASM-1 and ASM-2 above.

ASM-11. ENSURE ALL A2C2 ELEMENTS HAVE THE NECESSARY IFF/SIF CODES.

- AFATDS transmits ATO (which includes special instructions (SPINS) assigning IFF/SIF codes) to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]*
- CTAPS transmits ATO (which includes SPINS assigning IFF/SIF codes) to Air Force ASOC CTAPS located with the ARFOR. *[Air Force ASOCs are not assigned to Division-Level ARFOR.]*

ASM-12. PROVIDE TIMELY AND COMPLETE DISTRIBUTION OF THE ACO TO THE ARFOR TOC A2C2 ELEMENTS.

- AFATDS transmits ACO to ARFOR A2C2 AFATDS. *[If ARFOR A2C2 doesn't own AFATDS, the operator must use other ARFOR AFATDS when available.]*
- CTAPS transmits ACO to Air Force ASOC CTAPS located with the ARFOR.
- CTAPS transmits ACP to Air Force ASOC CTAPS located with the ARFOR.

ASM-13. MONITOR THE INTEGRATION OF ARMY AIR TRAFFIC SERVICES (ATS) FACILITIES INTO THE AIRSPACE CONTROL SYSTEM OF THE JAOC.

Manual Task.

ASM-14. REPRESENT THE ARFOR IN DEVELOPING THE ACO.

Use requirements in ASM-1 above.

ASM-15. PROVIDE THE ACA WITH THE LOCATION AND STATUS OF ARMY AIRFIELDS, NAVIGATION AIDS (NAVAIDS), STANDARD USE ARMY AVIATION FLIGHT ROUTES (SAAFR), AND ATS FACILITIES.

Manual Task.

IV.   POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare the devices for redeployment:

- Backup all system files.
- Purge all un-needed classified files.
- Power-down.
- Turn in the hard drive, classified diskettes and tapes to the BCD Security Manager.
- Place all hardware and software in shipping containers.

V.   POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare devices for sustainment training and future combat operations:

- Inspect systems for obvious damage during shipping.
- Connect systems to internal LAN.
- Power-up and initialize systems.
- Ping other BCD systems, once all are on-line.

Chapter 7

Airlift

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

No C4I device assigned to the Airlift Section. All preparation is manual.

II. PRE-HOSTILITY, IN-THEATER TASKS.

No C4I device assigned to the Airlift Section. All preparation is manual.

III. OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality. This section includes device capabilities, known limitations in brackets *[ ]*, and suggested workarounds in parentheses ( ).

ALF-1. BRIEF THE ALCC AND STAFF ON COMARFOR OBJECTIVES, CONCEPT OF OPERATIONS, AND AIRLIFT REQUIREMENTS.

ALF-1A. Receive courtesy copy of ARFOR requests.

- AIRLIFTREQs are transmitted via phone or FAX.

ALF-2. COORDINATE IMMEDIATE AIRLIFTREQs TO SUPPORT ARFOR OPERATIONS.

ALF-2A. Receive courtesy copy of ARFOR requests.

- AIRLIFTREQs are transmitted via phone or FAX.

ALF-2B. Track ARFOR missions during execution.

- C2IPS tracks ARFOR missions in the ALCC.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-2C. Pass information to ARFOR G-3 Air/G-4 Transportation.

Manual Task

- Use phone, FAX or another section's ABCS device to send S302 free text message.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-3. COORDINATE LOCATIONS OF DROP ZONES (DZ), PICK-UP ZONES (PZ), AND LANDING ZONES (LZ) TO INCLUDE THE PLANNED ACTIVITIES AND CONTROL PROCEDURES USED, WITH THE DIRECTOR OF MOBILITY FORCES (DIRMOBFOR).

ALF-3A. Pass information to ARFOR G-3 Air/G-4 Transportation.

- Use phone, FAX or another section's ABCS device to send S302 free text message.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-4. NOTIFY THE DIRMOBFOR IMMEDIATELY OF CHANGES TO THE ARFOR PLAN THAT AFFECT AIRLIFT OPERATIONS.

Manual Task

ALF-5. COORDINATE WITH THE ARFOR THEATER AIR TRAFFIC SERVICE (ATS) AND BCD ASM FOR ESTABLISHMENT OF NEW BASE DEFENSE ZONES (BDZ) AND CORRESPONDING INSTRUMENT APPROACH PROCEDURES.

Manual Task

ALF-6. PROVIDE THE COMARFOR AND COMARFOR STAFF THE FOLLOWING:

ALF-6A. Feedback on COMARFOR requests for preplanned airlift routed through logistic channels.

- Use phone, FAX or another section's ABCS device to send S302 free text message.

ALF-6B. Feedback on COMARFOR requests for immediate airlift routed through command channels, to include "heads up" mission planning with USAF airlift planners.

- Use phone, FAX or another section's ABCS device to send S302 free text message.
- *[AIRLIFTREQ are not currently in USMTF message format.]*

ALF-6C. Availability and operational status of airlift aircraft and airlift procedures as assigned by the JFC.

- C2IPS receives request from JMCC in ALCC.
- C2IPS tracks ARFOR missions in ALCC.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-6D. Status of airlift missions being executed in support of ARFOR operations.

- C2IPS tracks ARFOR missions in ALCC.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-6E. Theater planning parameters (for example, airlift and staging capabilities, handling equipment availability, refueling capabilities that drive the size and sustainment of potential airlift, airdrop, airborne, and air assault operations).

- Use phone, FAX or another section's ABCS device to send S302 free text message.

ALF-7. COORDINATE WITH THE THEATER ARMY MOVEMENT CONTROL AGENCY (TAMCA) AND/OR THE ARFOR G-4 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.

Manual Task

ALF-8. PROVIDE THE STATUS OF AIRLIFT OPERATIONS TO THE BCD COMMANDER, 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.

ALF-8A. Track JMCC-sent ARFOR requests in ALCC.

- C2IPS in ALCC receives request from JMCC.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-8B. Receive courtesy copy of ARFOR requests.

- *[No USMTF message format is assigned to AIRLIFTREQ template.]*

ALF-8C. Current status of missions being flown in support of ARFOR operations.

- C2IPS in ALCC tracks status of current missions being flown.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-9. COORDINATE WITH BCD OPERATIONS FOR FRIENDLY AND ENEMY GOB INFORMATION, AND GIVE THEM UPDATED AIRLIFT INFORMATION AS REQUIRED.

Manual Task

ALF-10. PERFORM THE FOLLOWING OPERATIONAL REQUIREMENTS:

ALF-10A. Facilitate, coordinate, and synchronize immediate and planned airlift requests with the JMCC, the TAMCA, and/or ARFOR G-3 Air and G-4 Transportation.

- Use phone, FAX or another section's ABCS device to send S302 free text message.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-10B. Get current ATOs from the ALCC and send them to the ARFOR G-3 Air and ARFOR G-4 Transportation.

- Use phone, FAX or another section's ABCS device to send S302 free text message.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-11. TASK CURRENT AIRLIFT MISSIONS FLOWN IN SUPPORT OF ARFOR OPERATIONS.

- C2IPS tracks ARFOR missions in the ALCC.
- *[Current BCD ABCS architecture does not interface with C2IPS.]*

ALF-12. ENSURE GLOs AT AIRLIFT WINGS HAVE CURRENT INFORMATION ON THE FRIENDLY AND ENEMY SITUATIONS.

Manual Task

IV. POST-HOSTILITIES, IN-THEATER TASKS.

There is no C4I device assigned to the Airlift Section. All post-hostilities tasks are manual.

V. POST-DEPLOYMENT, HOME-STATION TASKS.

There is no C4I device assigned to the Airlift Section. All post-deployment tasks are manual.

Chapter 8

System Administration

I.   PRE-DEPLOYMENT, HOME-STATION TASKS.

Tasks are to be completed at home-station to prepare device for operations in theater and for shipping.

- Identify correct digital map sheets for AO and ensure all workstations are loaded.
- Coordinate with higher, adjacent, and lower system administrators and J/G6 staffs to ensure all work stations information requirements are identified and deconflicted. (i.e. IP addresses if static IPs are required, Host names, O/R Names, etc.)
- Coordinate and plan for automated message/data flow between systems ensuring all requirements are satisfied and no message loops exist.

II.   PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in theater to configure devices for operations and verify connectivity with all agencies (BCD, JAOC, and ARFOR):

- Coordinate with higher, adjacent, and lower J/G6 staffs to ensure reliable LAN/WAN communications.
- Ensure system information flows are properly configured/implemented.
- Connect systems to LAN.

III.   OPERATIONAL TASKS.

Tasks and associated subtasks conducted during combat operations, with supporting device functionality.

- Monitor ABCS systems.

IV.   POST-HOSTILITIES, IN-THEATER TASKS.

Tasks completed in theater to prepare devices for redeployment:

- Monitor system maintenance.
- Purge all unneeded files and backup all system files.

V. POST-DEPLOYMENT, HOME-STATION TASKS.

Tasks completed at home-station to prepare for sustainment training and future combat operations:

- Document system performance (AAR) for system improvements.

Appendix A

Advanced Field Artillery Tactical Data System (AFATDS)

I. SYSTEM CAPABILITIES.

AFATDS is a multi-service (Army and USMC) fire support software system that operates on the Army's common hardware for the ABCS. AFATDS provides the commander with a robust ability to conduct automatic digital coordination on all fire support requests including ATACMS, air attack, naval surface fire, and mortar/cannon/rocket missions. This coordination allows the commander to quickly and automatically prioritize and engage targets on multiple missions to ensure the most important missions are processed first. It also checks incoming fire missions against FSCM, ACM, and unit ZOR. AFATDS notifies the operator of any violations and electronically requests clearance from the unit that established the control measure. The unit must approve or deny the request before the mission is allowed to continue processing.

AFATDS provides visual situational awareness displaying: unit locations, range fans, FSCMs, ACMs, target overlays, battlefield geometry, enemy locations, and common reference systems. Graphics can be tailored to separate overlays to filter what is displayed on the screen at any particular time.

AFATDS hosts a Tactical Air Support Module (TASM) that provides an automated interface capability with the CTAPS. AFATDS electronically generates and receives ASRs and passes them into CTAPS for nomination into the ATO. After the ATO is approved, TASM receives the ATOCONF from CTAPS, and determines which nominations were included in the ATO and displays them in the ASC. Those nominations not supported are displayed in the UTARL.

The AFATDS plays a vital role within the BCD since it is located in the Plans, Operations and ASM sections. AFATDS serves as the force FA C2 system that integrates fire support through fire support systems on the ground, close air support, and naval surface fires.

By using TASM, the AFATDS processes the ATO in accordance with the needs of both the BCD and the supported ARFOR.

USED BY BCD.

The following are used capabilities:

- Processes ATO (receive from CTAPS, display, parse into ASC and UTARL, and transmit to other C4I systems).
- Processes ACO (receive from CTAPS, parse specific ACMs, display as geometries, and transmit to other C4I systems).
- Deconflicts ACMs with FSCMs.

- Transmit CFFs.
- Resolves duplication of fires on targets.

OTHER CAPABILITIES.

The AFATDS has the following additional capabilities available for use:

- Prioritize multiple missions to ensure most important missions are processed first.
- Screen and filter mission requests and recommend denying missions that do not meet commander's guidance and attack criteria.
- Check mission requests for violations to FSCMs and initiate automatic coordination.
- Recommend best attack method.

II.   HARDWARE COMPONENTS.

The AFATDS consists of the hardware components shown below.

Transportable Computer Unit (TCU).

AFATDS software runs on a Version 2 Model 735 general processor operating at 125 megahertz (mHz) speed. It is equipped with 208 megabytes (MB) of random access memory (RAM) and a 2 gigabyte (GB) removable hard disk drive. It also has a 650 MB Magneto Optical (MO) Drive comes with a standard 1.44 MB floppy disk drive (FDD).

Super High Resolution Display (SHRD).

The SHRD is a 16" 1024x768 pixel, high resolution non-interlaced color monitor.

Power Converter/Uninterruptable Power Supply (PC/UPS).

This item is available in two configurations both will convert either 28 volts direct current (DC) (i.e. Vehicle Power) or 220 volts alternating current (AC) to 115 volts AC and provides 10 minutes of battery backup. It uses a standard AC power cord with a variety of outlet adapters for use in foreign countries.

Tactical Communication Interface Module (TCIM).

The TCIM has a small computer system interface (SCSI) and two software programmable communications channels. In AFATDS, normally one channel is programmed for combat net radio (CNR) systems. The other channel is programmed for all other communications.

Fiber Optic Medium Attachment Unit (FOMAU).

The FOMAU provides the interface between the AFATDS LAN connection and the fiber optic cable in certain LAN set-ups.

Electronic Printer (EP).

The EP is a standard 24 wire Dot Matrix Printer (DMP) and has both parallel and serial connections. It can be powered from the PC/UPS, uses a rechargeable battery as back-up, and has the capability to operate from 20 standard "AA" batteries. It can print at up to 300 characters per second.

III. SOFTWARE TOOLS.

- AFATDS software, A97T.0.2 (Hughes Build 5.5.C) is an UNIX-based HP operating system (OS) and is written in Ada computer language.
- TASM operates as a separate application that communicates with AFATDS.
- No web browsers are installed in AFATDS.

IV. DEVICE CONNECTIVITY REQUIREMENTS.

See BCD TB to be published by PM FATDS.

V. AFATDS INTERFACES.

Describes USMTF messages and functions that AFATDS passes to and receives from other devices within the BCD, ARFOR, and JAOC. "X" indicates interfaces successfully demonstrated during a BCD exercise. "?" indicates a stated capability but not yet observed at a BCD exercise. "-" indicates partial capability, with limitations stated under remarks.

Table A.1. Functionality Table

ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM

Column group headers (vertical codes): **AFATDS TO** — CTAPS, CGS‑A, MACFSADS, ... ; **TO AFATDS** — CTAPS, CGS‑A, MACFSADS, ...

USMTF	MESSAGES/FUNCTIONS	AFATDS TO	TO AFATDS	REMARKS
A423	ORDERS	? ?	? ?	
A659	AIR TASKING ORDER	X ?	?	
D210	CALL FOR FIRE	X	? X ? X	If using IFSAS, AFATDS must modify the original AMDWS D210.
D281	ARTY TGT INTEL CRITERIA	X	X	
D670	AIR SUPPORT REQUEST	X	X X	
G131	INTEL SUMMARY	X	X	
S201	BATTLEFIELD GEOMETRY	? - X X -	? X X X ? X	AMDWS receives but cannot parse.
S302	FREE TEXT MESSAGE	X X X X X	X X X X X	
S309	ENEMY INTEROP MSG	X X	X X	ASAS‑RWS receives but cannot parse‑fix.
S507L	RESOURCE LOCATION	X - X X X	X X X - X	
	AIR TASKING ORDER CONF		X	AFATDS converts ATO Conf into USMTF A659.
	AIRSPACE CONTROL ORDER		X	
	COP, RED GROUND		X	
	COP, BLUE GROUND		X	
	SCREEN CAPTURES	X ?	X	
	FILE TRANSFER PROTOCAL	X X X X X X	X X X X X X X	

ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM

AFATDS		AFATDS TO	TO AFATDS	REMARKS
	MESSAGES/FUNCTIONS	CTAPS · GCCS-A · MCS · AFAADS · ASADWS · AMCTSS		
USMTF		X	X	
E-MAIL		?	?	

VI. MAINTENANCE/SUSTAINMENT.

See BCD TB to be published by PM FATDS.

VII. INDIVIDUAL TRAINING.

TRAINING MANUALS.

Draft TB 11-7025-297-10, *AFATDS Operator's Notebook*, 1 November 1996.

OPERATORS COURSES.

The operator's course is given at Fort Sill, Oklahoma. For a course schedule, contact Fire Support and Combined Arms Operations Department, Command/Control/Communications Division, Defense Switched Network (DSN): 639-3419/2082.

EMBEDDED TRAINING.

AFATDS possesses embedded training scenarios for individual training. Embedded training for the TASM module is not yet available.

VIII. POC/HOTLINE.

Office of the Program Manager (OPM) FATDS, Commercial: (908) 427-3322/3378; DSN: 987-3322/3378. Fort Monmouth, NJ.

TSM AFATDS Commercial: (405) 442-6836/6837; DSN: 639-6836/6837. Fort Sill, OK.

PM FATDS: http://134.80.68.53

Appendix B

Air and Missile Defense Workstation (AMDWS)

I.   SYSTEM CAPABILITIES.

The AMDWS provides the Army commander the tools to plan his defense, assess the enemy's intent, monitor air defenses during the course of engagement, and react once an attack begins.

The AMDWS receives and processes various intelligence data to determine accurate targeting information for forwarding to active defense components. It provides the commander with a thorough picture of the current situation; a fused ground and air picture of the current battlefield as well as a friendly and reported enemy air, ground and naval picture. Air threats displayed include air breathing, TBM threat, and cruise missile/UAV threat. These air threats flow into the AMDWS from various external sources where they are correlated and saved into a central repository. This repository provides the basis for air tracking over a digitized map in near-real-time or in retrospect using a playback mode.

Along with air events, friendly and enemy positions and recorded control measures are received into the central repository. The entire database provides the commander with a consolidated fused ground and air picture that can be graphically presented over military maps or false-colored terrain from Defense Mapping Agency (DMA) map data in both two dimensional and three dimensional. Air pictures are displayed in near-real-time as updates are received. AMDWS can assist in alerting units of impending threats such as a TBM launch or an NBC threat, as well as initiating a call for fire on the source of the threat.

The AMDWS provides the mission planner with the tools to effectively deploy forces and defend assets against a known threat. The AMDWS was developed to provide an automated tool in solving tactical/staff planning problems.

USED BY BCD.

Communications:

- Chat between AMDWSs.
- Automatic message passing.
- E-mail with CTAPS.

Mapping:

- Composite military maps/false colored terrain from DMA map data. Available mapping options are ARC Digitized Raster Graphics (ADRG), Digital Terrain Elevation Data (DTED) (gray scale or colored), satellite aerial image (currently not available), and no map.
- Two dimensional and three dimensional capability.
- Sensor coverage.

- Coordinate system.
- Coordinate conversion.
- Near-real-time (as received) display of friendly and enemy ground units.
- Near-real-time (as received) display of friendly and enemy aircraft, cruise missiles, and UAVs in flight.
- Near-real-time (as received) of display friendly and enemy ships.
- Near-real-time display of TBM launch points, flight paths, and impact areas.
- ACMs portrayed without a true width.
- Battlefield Graphics display.
- Draw capability.
- Point determination.
- Point to point distance and point to point sum determination.
- Line of Sight determination.

Call for Fire:

- CFF format.
- AFATDS connectivity.

Playback capability:

- Six hour playback of an event.

Security:

- User password.

OTHER CAPABILITIES.

The AMDWS has the following additional capabilities available for use:

NBC:

- Downwind hazard determination.

Mapping:

- Common picture from MCS.
- Shot opportunity analysis.

II. HARDWARE COMPONENTS.

- Sun Ultra 1 Model 170.
- 4.2 GB Hard Drive.
- V1 19" color monitor.

- Compact disk read only memory (CD ROM) drive.
- Mass Storage Expansion Unit (MSEU).

NOTE: Interface requirements are a mobile subscriber equipment (MSE) or secure telephone unit (STU-III) connection from the ADSI to Forward Area Air Defense Command and Control Intelligence (FAADC2I) system when working with divisions and a dedicated KY-68.

III. SOFTWARE TOOLS.

- AMDWS Version A.
- Solaris 2.5.1.
- MS Office Professional.
- No web browsers are installed in AMDWS.

IV. DEVICE CONNECTIVITY REQUIREMENTS.

See BCD TB to be published by PM FATDS.

V. AMDWS INTERFACES.

Describes USMTF messages and functions that AMDWS passes to and receives from other devices within the BCD, ARFOR, and JAOC. "X" indicates interfaces successfully demonstrated during a BCD exercise. "?" indicates a stated capability but not yet observed at a BCD exercise. "-" indicates partial capability, with limitations stated under remarks.

Table B.1. Functionality Table

USMTF	AMDWS AIR AND MISSILE DEFENSE WORKSTATION — MESSAGES/FUNCTIONS	AMDWS TO (ADSI)	AMDWS TO (GCCS)	AMDWS TO (MCS/ADA)	AMDWS TO (AFATDS)	AMDWS TO (ASAS)	AMDWS TO (CSSCS)	AMDWS TO (ADSI-WS)	AMDWS TO (AMDADS)	TO AMDWS (ADSI)	TO AMDWS (GCCS)	TO AMDWS (MCS/ADA)	TO AMDWS (AFATDS)	TO AMDWS (ASAS)	TO AMDWS (CSSCS)	TO AMDWS (ADSI-WS)	TO AMDWS (AMDADS)	REMARKS
A423	ORDERS									?								
A659	ATO									?							X	
C110	INTEL REPORT			X								X						
D210	CALL FOR FIRE			X								X						If using IFSAS, AFATDS must modify the original AMDWS D210.
S201	BATTLEFIELD GEOM	-		X					X	-		-					X	AMDWS parses but can take only 15 points per message from AMDWS and CTAPS. From AFATDS the message is received as text.
S302	FREE TXT MSG	X	X	X	X					X	X	X	X					
S309	ENEMY INTEROP MSG								X								X	
S507L	RES LOC DATA	X	X		X				-	X	X	X	X				-	Receive or transmit to AFATDS (Patriot positions).
	TADIL B											X						Requires a MSE switchboard and an ADI.
	TADIL J											X						Via LAN.
	TIBS/TRAP											X						Requires serial feed.
	FDL											X						Via LAN.
	TBM SIGNAL								X								X	Via LAN.
	FILE TRANSFER PROTOCAL	X	X	X	X	X				X	X	X	X	X				Via LAN.

AMDWS

AIR AND MISSILE DEFENSE WORKSTATION

USMTF	MESSAGES/FUNCTIONS	AMDWS TO						TO AMDWS						REMARKS
		ADSI-	GCCS-A	MCS	ADFSA	AFATDS	ADA-SS	ADSI-	GCCS-A	MCS	ADFSA	AFATDS	ADA-SS	
	CHAT	X	X					X	X					Can use X-Chat or Unix Talk utility.

VI.   MAINTENANCE/SUSTAINMENT.

See BCD TB to be published by PM FATDS.

VII.   INDIVIDUAL TRAINING.

TRAINING MANUALS.

AIR and MISSILE DEFENSE WORKSTATION (AMDWS) Training Guide, not dated.

OPERATOR COURSES.

Operator training is available from the 6th ADA Training Brigade, Fort Bliss, Texas. POC at commercial: (915) 568-1904; DSN: 978-1904; FAX: XXX-2641.

EMBEDDED TRAINING.

There is currently no embedded training capability built into the AMDWS.

VIII. POC/HOTLINE.

OPM, Air Defense Command and Control Systems (ADCCS), Commercial: (205) 895-8666/4283; DSN: 788-4291/4283, Huntsville, AL.

TSM AMDWS at commercial: (915) 568-0117; DSN: 978-0117.

Appendix C

Maneuver Control System (MCS)

I. SYSTEM CAPABILITIES.

MCS provides Army tactical commanders and their staffs automated, on-line, near real-time systems for planning, coordinating and controlling tactical operations and for receiving, processing, and displaying tactical command and control information. MCS is the force level commander's information system and integrates the maneuver function with the C2 systems of the other four functional areas (FS, AD, IEW, and CSS). The system provides the principle operational interface between ABCS systems. MCS provides automated support in the preparation and distribution of operational plans, orders, and reports through the chain of command to facilitate monitoring the execution of operations.

USED BY BCD.

The following are used capabilities:

- Overlay creation and distribution (Maps and Overlays).
- Filtering by unit type and size (Maps and Overlays).
- Overlay function for marking and labeling points of interest (Maps and Overlays).
- Can use a drawing tool (Show-me) on the digital map to show advances or other possible maneuver graphics freehand without creating a template or marking the map (Maps and Overlays).
- Map scale, map zoom, magnification of area, and choice of LAT/LONG or UTM coordinates (Maps and Overlays).
- Send the information on the MCS monitor using "Snap Shot" to AFATDS for comments, etc. (Toolbox).
- Pass the following messages frequently (Message Handler):
  - ➢ S302 Free text messages.
  - ➢ S507L Friendly unit locations.
  - ➢ S201 Battlefield geometry.
- Can create distribution lists and autoforward messages (Message Handler).
- Netscape Help files (Help/Netscape).
- Six different "desktops", placing most-used applications open on each of the desktops to allow for quick access of the information.
- Use MS Office Suite 4.3 for document and PowerPoint presentation preparation.

OTHER CAPABILITIES.

The MCS has the following additional capabilities available for use:

- The course of action function allowing the commander to schedule events by unit to insure proper coordination of effort (Synchronization Matrix).
- The wargaming function (Force Ratio Tool) allowing the user to pit units against each other to find the theoretical winner with all known information on both sides (Maps and Overlays).
- "3D Viewer" of terrain, line of sight analytical tool, as well as travel time tool (Maps and Overlays).
- Observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach (OCOKA) features allowing the operator to plan avenues of approach, etc. (Maps and Overlays).
- Attach OPORD to SITMAP (Maps and Overlays).
- Reports (Mercedes, 18-Wheeler, Chicklet, and Gumball) containing all unit logistical and personnel information received from CSSCS (Reports).
- OPORD/OPLAN creation (OPORD).
- The organization chart for the force units down to brigade (UTO).
- Modify units, command relationships in the organization chart (UTO).

II.   HARDWARE COMPONENTS.

The MCS consists of the following hardware components:

- SPARC 20 Workstation.
- 9.1 GB Hard Drive.
- V1 19" color monitor.
- 3 ½" FDD.
- CD ROM drive.
- Magneto Optical drive.
- MSEU.

III.   SOFTWARE TOOLS.

- MCS version 12.01 with various builds to include 7.0K with two patches.
- Solaris 2.5.1 software.
- The MCS also has MS Office Professional software installed.
- Web browser is installed in MCS, limited to internal help functions.

IV. DEVICE CONNECTIVITY REQUIREMENTS.

See BCD TB to be published by PM FATDS.

V. MCS INTERFACES.

Describes USMTF messages and functions that MCS passes to and receives from other devices within the BCD, ARFOR, and JAOC. "X" indicates interfaces successfully demonstrated during a BCD exercise. "?" indicates a stated capability but not yet observed at a BCD exercise. "-" indicates partial capability, with limitations stated under remarks.

Table C.1. Functionality Table

MCS		MCS TO					TO MCS					REMARKS
MANEUVER CONTROL SYSTEM		CTAPS	GCCS-A	MCFS-TDS	AADS	ACS-WPS-S	CTAPS	GCCS-A	MCFS-TDS	AADS	AMDWS	
USMTF	Message/Function											
A423	ORDERS	?	?	X	?		?	?	X		X	
A659	AIR TASKING ORDER							?				
C110	INTEL REPORT			X					X			
D210	CALL FOR FIRE		?									
G131	INTEL SUMMARY										X	
S201	BTLFLD GEOM	?	X	-	-		?	X		?	X	-	AMDWS receives and can parse up to 15 points per message. ASAS-RWS receives but cannot parse.
S302	FREE TXT MSG		X	X	X	X		X	X	X	X	
S309	ENEMY INTEROP MSG	X					X				X	
S507L	RES LOC DATA	X	-	X			X		-	X		MCS cannot parse from GCCS-Army. ASAS-RWS receives but does not parse.
	COP, BLUE GROUND	X	X	X			X		X		X	
	COP, RED GROUND	X	X				X					
	FILE TRANSFER PROTOCAL	X	X	X	X	X	X	X	X	X	X	Files are FTP to MCS to open in PowerPoint.
	CHAT	X	X				X	X			X	Can use X-Chat or Unix Talk utility.
	SCREEN CAPTURE		X					?				

VI.   MAINTENANCE/SUSTAINMENT.

See BCD TB to be published by PM FATDS.

VII.   INDIVIDUAL TRAINING.

TRAINING MANUALS.

Volumes 1-10, *Maneuver Control System (MCS) Performance Prove-Out Test 5.0, Software Test Procedures*, 3 June 1996.

Maneuver Control System, PM Operations Tactical Data System (OPTADS), MCS Prototype V12.01, Software User's Manual (DRAFT), 10 June 96.

OPERATORS COURSES.

The operator's course is taught at Fort Hood, Texas. For a course schedule, contact Fort Monmouth, NJ, DSN: 992-6504.

EMBEDDED TRAINING.

Currently, there is no embedded training.

VIII. POC/HOTLINE.

OPM, ABCS, Bldg 455, Fort Monmouth, NJ, 07703. Commercial: (908)532-6504/6482/6581; DSN: 992-6504/6482/6581; FAX: -5217.

TSM MCS, Commercial: (913)684-4546/4537/4514/4515; DSN: 552-4546/4537; FAX: -4542. Fort Leavenworth, KS.

Web Page: http://leav-www.army.mil/tpioabcs/mcs.htm
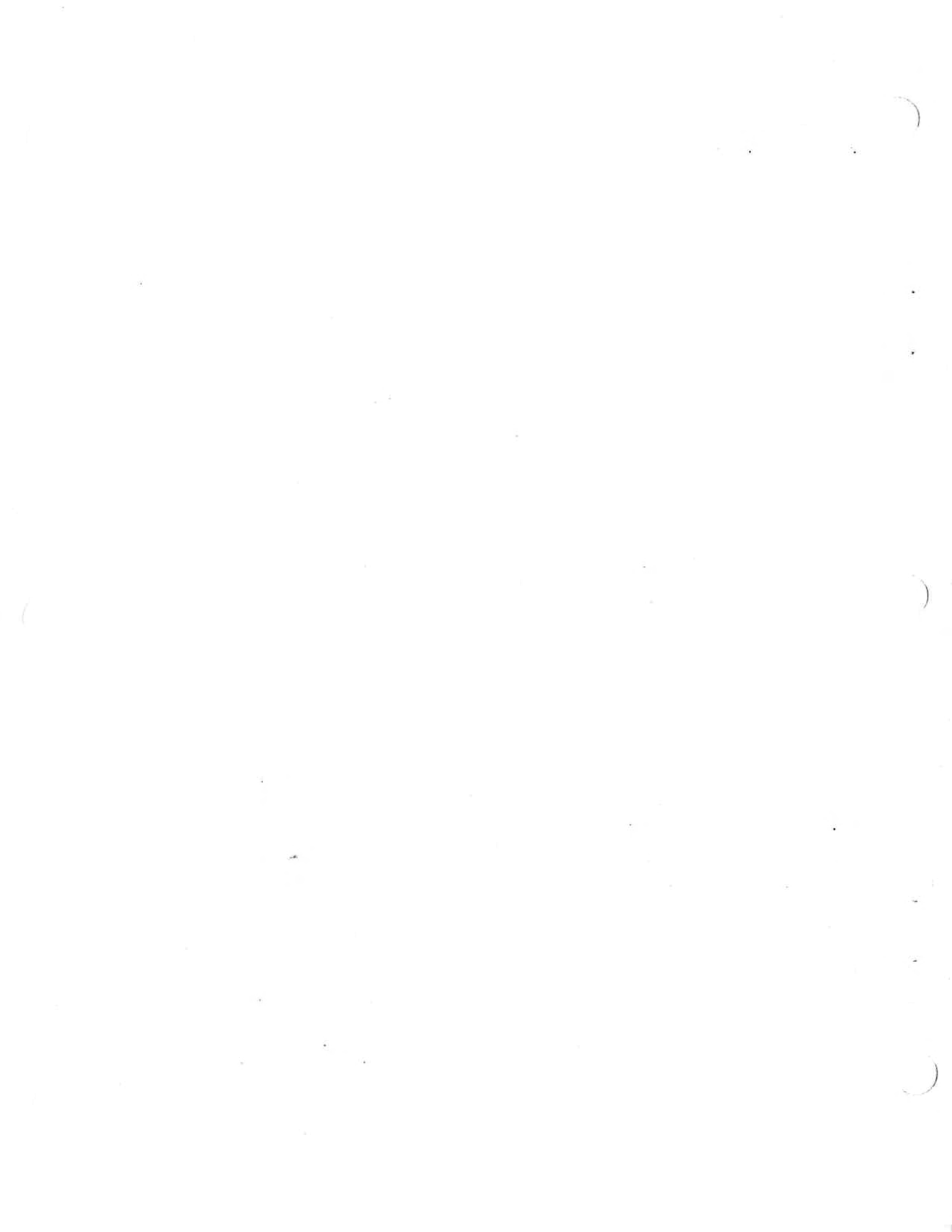
Appendix D

All Source Analysis System – Remote Workstation (ASAS-RWS)

I. SYSTEM CAPABILITIES.

ASAS-RWS is the IEW sub-element of the ABCS. It provides combat leaders the all source intelligence needed to view the battlefield and more effectively conduct the battle. ASAS-RWS provides a tactically deployable system with a capability to receive and correlate data from strategic and tactical intelligence sensors/sources, produce enemy situation displays, and rapidly disseminate intelligence information. In addition, it nominates targets, manages collection requirements, and provides operations security support. ASAS-RWS is designed to operate in a joint environment across the spectrum of conflict.

USED BY BCD.

Situation Display.

Communications:

- Automatic message parsing, message fill, and routing.
- DNS allowing ASAS to access local command home pages.
- Net browser to allow access to INTELINK-S.
- Report and message creation, edit, review, and dissemination.

Maps and Graphics:

- Standard DMA products World Vector Shoreline (WVS), Digital Feature Analysis Data (DFAD), and DTED. The PM shop must provide modified ADRG.
- Coordinate conversion.
- Graphical chat between hosts.

Security:

- User and manager password; audit review/archive protected by special duty passwords.

Databases:

- Display of friendly and enemy databases.
- Automated database fills from ASAS-AS EDC message (and periodic updates), ABCS and USMTF messages.
- Event alarms alerting the operator of incoming messages based on database updates and other criteria to trigger auto-retrieval and auto-fill for messages and applications.

User Utilities:

- Coordinate conversions.
- File manipulation.

OTHER CAPABILITIES.

The ASAS-RWS has the following additional capabilities:

Communications:

- Encrypted interfaces with ASAS-AS, ABCS battlefield functional areas (BFA), theater system MSE, Enhanced Tactical Users Terminal (ETUT), Single-Source Processor, Army Command, Control, Communications, and Intelligence (C3I) Single Source Processor (SSP-S), Relocatable Army Processors for Intelligence Data Europe (RAPIDE), Tactical Simulation (TACSIM), and MCS interfaces.
- Enhanced Intelligence Preparation of the Battlefield (IPB) tools.
- Overlay creation, display, printing, unit plotting, and transmission to other systems.

Imagery:

- Receives, displays, and annotates national imagery transmission format (NITF) imagery.
- Displays live UAV video.

Situation/event planning:

- Creates and modifies areas of interest, no go/slow go areas, avenues of approach, mobility corridors and key terrain.
- Event planning includes named areas of interest (NAI), time-phase lines, and event matrix reports.

Target planning:

- Creates and maintains target databases and reports for NAIs/target areas of interest (TAI), high payoff targets (HPT), high value targets (HVT), and attack guidance.
- Event planning includes NAIs, time-phase lines, and event matrix reports.

Workstation system manager:

- System configuration and control.
- Disk maintenance, disk monitor.

Security:

- Anomalous security messages issued to Information Special Security Officer (ISSO).
- Audit trails.

- Formats diskettes for either sensitive compartmented information (SCI) or collateral dissemination.
- Meets Defense Intelligence Agency (DIA) security criteria.

User Utilities:

- Printing of windows, reports, overlays.
- Overlay plotting to map scales.

II. HARDWARE COMPONENTS.

- SPARC 20 Workstation.
- 2 ea 4.2 GB Hard Drives.
- V1 19" color monitor.
- Tape drive.
- CD ROM drive.
- MSEU.

III. SOFTWARE TOOLS.

- ASAS-RWS version 1 Block 1/RWSv1 SWE v2.1.
- Sun OS 4.1.3 software.
- No MS Office Professional is installed in ASAS-RWS.
- A web browser is installed in ASAS-RWS.

IV. DEVICE CONNECTIVITY REQUIREMENTS.

See BCD TB to be published by PM FATDS.

V. ASAS-RWS INTERFACES.

Describes USMTF messages and functions that ASAS-RWS passes to and receives from other devices within the BCD, ARFOR, and JAOC. "X" indicates interfaces successfully demonstrated during a BCD exercise. "?" indicates a stated capability but not yet observed at a BCD exercise. "–" indicates partial capability, with limitations stated under remarks.

Table D.1. Functionality Table

		ASAS-RWS TO						TO ASAS-RWS						REMARKS
USMTF	**Message/Function**	ASAS	GCCS-A	MCS	AFATDS	ASAS-SS	AMDWS	ASAS	GCCS-A	MCS	AFATDS	ASAS-SS	AMDWS	
A423	ORDERS	X	?	?				X	?					
C110	INTEL REPORT	X		X				X					X	
D210	CALL FOR FIRE				?									
D281	ARTY TGT INTEL CRITERIA				X						X			
G131	INTEL SUMMARY	X	X											
S201	BTLFLD GEOM		?					–	X					ASAS-RWS V2.2 should correct inability to parse.
S302	FREE TXT MSG	X	X	X	X	X	X	X	X	X	X	X	X	
S305	TGT INTEL DATA				X						X			
S309	ENEMY INTEROP MSG	X	X	X				X						
S507L	RES LOC DATA							–	X					ASAS-RWS V2.2 should correct inability to parse.
	EXT DB COORD (EDC)									X				
	CHAT	X	X	X				X	X	X				
	FILE TRANSFER PROTOCOL	X	X	X				X	X	X	X	X	X	Files are FTP to MCS to open in PowerPoint.

VI. MAINTENANCE/SUSTAINMENT.

See BCD TB to be published by PM FATDS.

VII. INDIVIDUAL TRAINING.

TRAINING MANUALS.

There are currently no specific Army training manuals for the ASAS-RWS. FM 34-25-3 *All-Source Analysis System and the Analysis and Control Element* covers the ASAS family of system in general terms.

OPERATOR COURSES.

During initial fielding of ASAS, the Army Intelligence Center provides ASAS-RWS NET at the gaining units. The ASAS-RWS NET "Train-the-Trainer" is the foundation for NET for the ASAS-RWS. The NET consists of operator, supervisor, and leader training with a separate CSS operator course. Operator training includes technical and mission-oriented training. Technical training consists of hardware skills such as cabling, configuring LANs, calling up software applications, and operator level maintenance. Mission-oriented training addresses military occupational specialty (MOS) tasks, IEW tasks, and unit specific requirements. No formal TRADOC course is available for ASAS-RWS.

EMBEDDED TRAINING.

Currently, there is no embedded training capability built into the ASAS-RWS.

VIII. POC/HOTLINE.

OPM, Intelligence Fusion, Commercial: (703) 275-8151/8091; DSN: 235-XXXX; FAX: (703) 275-8251.

TSM ASAS-RWS, Commercial: (520) 533-3504/3507; DSN: 821-3504/3507

Web Page: www.army.mil/pmif-pg/index.htm

Appendix E

Global Command and Control System - Army (GCCS-Army)

I. SYSTEM CAPABILITIES.

GCCS-Army provides a single seamless command and control system built around the DII COE and is being integrated with the DoD GCCS. The GCCS-Army integrated acquisition strategy ensures software and technology reuse and eliminates duplication among intra-service as well as inter-service command and control systems. Integration will be partially achieved from the "best of breed" process as GCCS-Army and GCCS share and reuse software modules. The Joint Service/Agency GCCS engineering team, sponsored by DISA is identifying these software modules. GCCS-Army is fundamentally GCCS with additional Army functionality.

USED BY BCD.

Communications:

- Automated Message Handling System (AMHS), message parsing, message fill, and routing.
- NewsGroups provides the latest news-related information through a text-based, non-persistent, non-real-time news access.

Maps and Graphics:

- Standard DMA products including ADRG, VVS, DFAD, and DTED.
- Coordinate conversion.
- Real-time (as received) display of friendly and enemy ground units.
- Real-time (as received) display of friendly and enemy aircraft, cruise missiles, and UAVs in flight.
- Real time (as received) display of friendly and enemy ships.
- Real-time display of TBM launch points, flight paths, and impact areas.
- Battlefield graphics displayed.
- Draw capability.
- Point to point distance determination.

Security:

- User and manager password; audit review/archive protected by special duty passwords.

OTHER CAPABILITIES.

The GCCS-Army has the following additional capabilities available for use:

Communications:

- INTELINK-S, a single source for processed intelligence data.
- GCCS Status of Resource and Training System (GSORTS)/GSORTS application Information Queries (GIQ), accesses Joint Services SORTS (JS SORTS) data to develop courses of data.
- Secret E-mail, data point-to-point, using a group account.
- Zircon chat, real time communications by typed text.
- Internet Relay Chatter (IRC).

System Management:

- Chronological log (CHRONOLOG) provides positions to be incorporated into a chronological listing for that project.
- Monitor displays processor status, logged-in user information, error log, and sends and receives system alarms.

Workstation Management:

- Position Log (PLOG); capture of important events by positions and document action taken.
- Run Remote (RREM); accesses an application on a remote host.

Planning:

- ATO/ACO, provides complete graphical depiction of a particular airspace.
- Joint Operations, Planning and Execution System (JOPES) Tools, develops courses of action for crisis management.
- Dynamic Analysis and Replanning Tool (DART), generates, changes, and analyzes Time Phased Force Deployment Data (TPFDD).
- Requirements Decision Analyzer (RDA), replacement system for DART, displays available OPLANs.
- Logistics Sustainment Analysis and Feasibility Estimator (LOGSAFE), assesses sustainment feasibility of proposed OPLAN.
- Joint Flow and Analysis System for Transportation (JFAST); analyzes transportation from origin to debarkation.
- Force Augmentation Planning and Execution System (FAPES), identifies manpower resources to support a course of action.
- GSORTS; graphical interface to a common pool of information about the status and location of military forces through the world.
- Joint Maritime Command Information System (JMCIS); tracks the status, location, projected movement, and threat status of ships, submarines, airplanes, and shore units.

- Theater Analysis and Replanning Graphical Execution Toolkit (TARGET); performs current assessment plan generation, scheduling, and analysis.
- Evacuation File Maintenance and Retrieval System (EVAC); database that provides answers to queries on evacuation plans.
- Joint Engineering Planning and Execution System (JEPES); assists in developing the Civil Engineering Support (CESP) annex to the OPLAN.
- Medical Planning and Execution System (MEPES); predicts and evaluates medical requirements in support of an OPLAN.
- Scheduling and Movement (S&M); in-transit tracking of all land, sea, and air carriers independent of OPLAN execution.

Intelligence:

- Joint Deployment Intelligence Support System (JDISS); connectivity and interoperability with intelligence systems.

Security:

- Audit Log; provides the Security Administrator access to audit information, workstation, user, granularity level, application, and audit event.

User Utilities:

- Netscape/http tools.

II. HARDWARE COMPONENTS.

- SPARC 20 Workstation.
- 4.2 GB Hard Drive.
- V1 19" color monitor.
- CD ROM drive.
- MSEU.
- Tape Drive.

III. SOFTWARE TOOLS.

- GCCS-Army version 2.2.1.
- Solaris 2.3 software.
- MS Office 4.3 Professional is installed in GCCS-Army.
- Net browser is installed in GCCS-Army.

IV. DEVICE CONNECTIVITY REQUIREMENTS.

See BCD TB to be published by PM FATDS.

V. GCCS-ARMY INTERFACES.

Describes USMTF messages and functions that GCCS-Army passes to and receives from other devices within the BCD, ARFOR, and JAOC. "X" indicates interfaces successfully demonstrated during a BCD exercise. "?" indicates a stated capability but not yet observed at a BCD exercise. "-" indicates partial capability, with limitations stated under remarks.

Table E.1. Functionality Table

GCCS-ARMY — ARMY GLOBAL COMMAND AND CONTROL SYSTEM		GCCS-A TO						TO GCCS-A						REMARKS
USMTF	Message/Function	GCCS	GCCS	MCCS	AFATDS	ASAS-RWS	AMDWS	GCCS	GCCS	MCCS	AFATDS	ASAS-RWS	AMDWS	
A659	ATO	X	X	X	X	X	X	?						
S201	BATTLEFIELD GEOMETRY	X	X	X	X			X	X	X	X	X	X	
S302	FREE TXT MSG	X	X		X	X		X	X	X	X	X		GCCS-Army – GCCS interface is by OTH-GOLD.
S309	ENEMY INTEROP MSG	X	X	-	X			X	X	X	X	X	X	MCS cannot parse from GCCS-Army. GCCS-Army – GCCS interface is by OTH-GOLD.
S507L	RES LOC DATA												X	GCCS interface is by OTH-GOLD.
	Chat	X	X	X				X	X	X	X			Can chat using X-Chat or Unix talk utility.
	COP, RED GROUND	X	X		X			X	X	X				
	COP, BLUE GROUND	X	X	X	X			X	X	X				
	COP, RED AIR	X	X					X	X	X				
	FILE TRANSFER PROTOCAL	X	X	X	X	X	X	X	X	X	X	X	X	
	COP, BLUE AIR	X	X					X	X	X				

VI. MAINTENANCE/SUSTAINMENT.

See BCD TB to be published by PM FATDS.

VII. INDIVIDUAL TRAINING.

TRAINING MANUALS.

AGCCS Quick Reference Guide, AGCCS Start Up Operational Users Capability Package (Draft), dated 26 January 1996.

GCCS Workstation Familiarization, January 95, Handout (HO) 90P 004, Air Education Training Center, 81st Training Wing, 333d Training Squadron Keesler Air Force Base (AFB), MS, 39534-2402.

Desktop V2.0 Handout, April 14,1995, HO 90P 010, Air Education Training Center, 81st Training Wing, 333d Training Squadron Keesler AFB, MS, 39534-2402.

Note: GCCS-Army was formerly AGCCS. Training manuals are rapidly outdated due to the evolution of the GCCS-Army and GCCS software.

OPERATORS COURSES.

GCCS-Army POC for training is Mr. Andy West, (404) 362-7316. Training registration is available at www.forscom.army.mil. Coordination for a mobile training team is available through Mr. West.

TRADOC POC for GCCS slots and approval for resident course attendance is Mr. Jim Gibbons, DSN: 680-3001. The course provides instruction on database management, system administration, and networking.

GCCS Single Service Training Manager (SSTM) is Mr. Henry Wright, Keesler AFB, MS, DSN: 597-5377. Mr. Wright can provide resident course dates and information on mobile training teams (MTT). Resident training is available at Keesler AFB, MS and Sterling, VA.

EMBEDDED TRAINING.

There is currently no embedded training capability built into the GCCS-Army.

VIII. POC/HOTLINE.

OPM, Global Command and Control Systems-Army (GCCS-Army), Commercial (908) 427-2020; DSN 987-2020.

TSM GCCS-Army, Commercial: (913) 684-4537/4546; DSN: 552-4537/FAX-4542.

Web Page: www.stccs-home.army.mil/

Appendix F

Integrated Operations

The BCD C4I Architecture operates as a "System of Systems", passing information between numerous agencies: ARFOR and BCD, JAOC and BCD, and within BCD sections. This appendix describes the doctrinal techniques used to perform the BCD's collective tasks as "threads". During equipment fielding preparation, the NET Team and the NET'ed BCD will design theater-specific threads tailored to unit variables (C4I architecture, mission, personnel, coordinating agencies.) These threads will be validated and adjusted as necessary during the NET.

DOCTRINAL THREADS.

Doctrinal threads are divided into the categories below:

- Thread 1: ATO Production
- Thread 2: ACO Production
- Thread 3: Red Force Situational Awareness
  - ➤ 3a - Red Ground.
  - ➤ 3b - Red Air.
- Thread 4: Blue Force Situational Awareness
  - ➤ 4a - Blue Ground (Source: MCS).
  - ➤ 4b - Blue Ground (Source: GCCS-Army).
  - ➤ 4c - Blue Air.
- Thread 5: Airspace Control Measure (ACM) Requests
  - ➤ 5a - Planned.
  - ➤ 5b - Immediate (Request After ACO Published).
- Thread 6: ATACMS Missions
  - ➤ 6a - ARFOR Initiated (Planned).
  - ➤ 6b - ARFOR Initiated (Immediate).
  - ➤ 6c - JFACC Initiated (Planned).
  - ➤ 6d - JFACC Initiated (Immediate).
- Thread 7: Theater Missile Defense Attack Operations
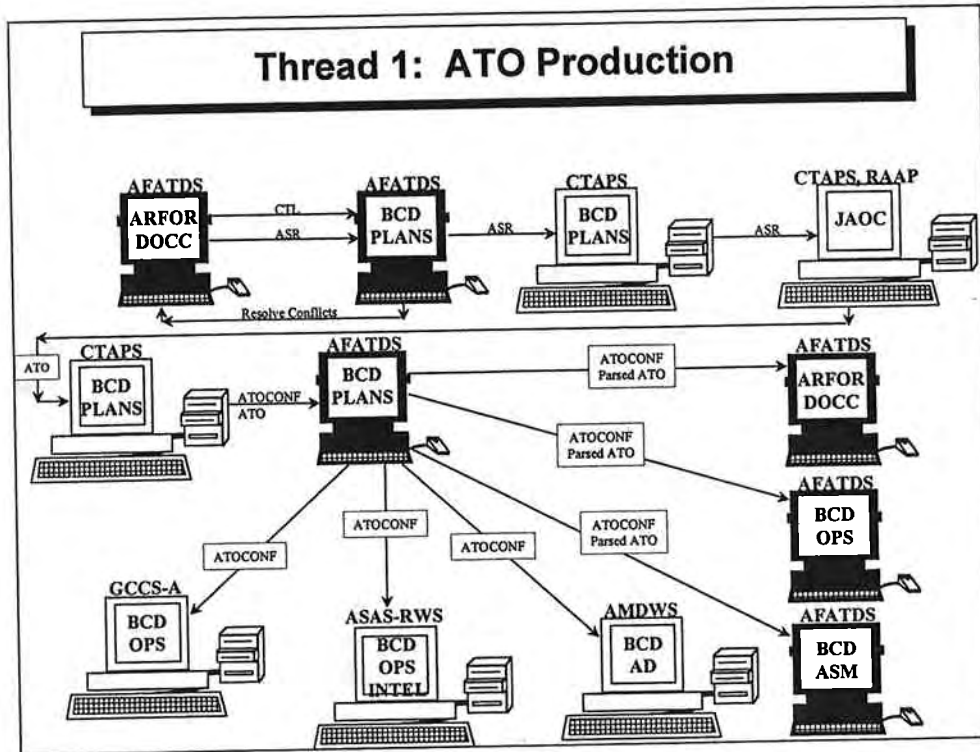
Figure F.1 Thread 1: ATO Production

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
			Table F.1 Thread 1: ATO Production				
1	ARFOR DOCC	AFATDS	CTL	ADP	BCD Plans	AFATDS	Check for dup's, no strikes
2	ARFOR DOCC	AFATDS	ASR	ADP	BCD Plans	AFATDS	Check for completeness
3	BCD Plans	AFATDS	Resolve Conflicts	ADP	ARFOR DOCC	AFATDS	
4	BCD Plans	AFATDS	ASR's	E-Mail	BCD PLans	CTAPS	
5	BCD Plans	CTAPS	ASR's	NA	JAOC	CTAPS, RAAP	Enter manually
6	JAOC	CTAPS	ATO	NA	BCD Plans	CTAPS	E-mail to AFATDS
7	BCD Plans	CTAPS	ATOCONF	A659	BCD Plans	AFATDS	Does Parse w/ its ASR's
8	BCD Plans	AFATDS	ATOCONF	ADP	ARFOR DOCC	AFATDS	
9	BCD Plans	AFATDS	ATOCONF	ADP	BCD Opns	AFATDS	
10	BCD Plans	AFATDS	ATOCONF	ADP	BCD ASM	AFATDS	
11	BCD Plans	AFATDS	Parsed ATO	ADP	ARFOR DOCC	AFATDS	
12	BCD Plans	AFATDS	Parsed ATO	ADP	BCD Opns	AFATDS	
13	BCD Plans	AFATDS	Parsed ATO	ADP	BCD ASM	AFATDS	
14	BCD Plans	AFATDS	ATOCONF	A659	BCD AD	AMDWS	
15	BCD Plans	AFATDS	ATOCONF	A659	BCD OPS	ASAS-RWS	
16	BCD Plans	AFATDS	ATOCONF	A659	BCD OPS	GCCS-A	

Figure F.2 Thread 2: ACO Production

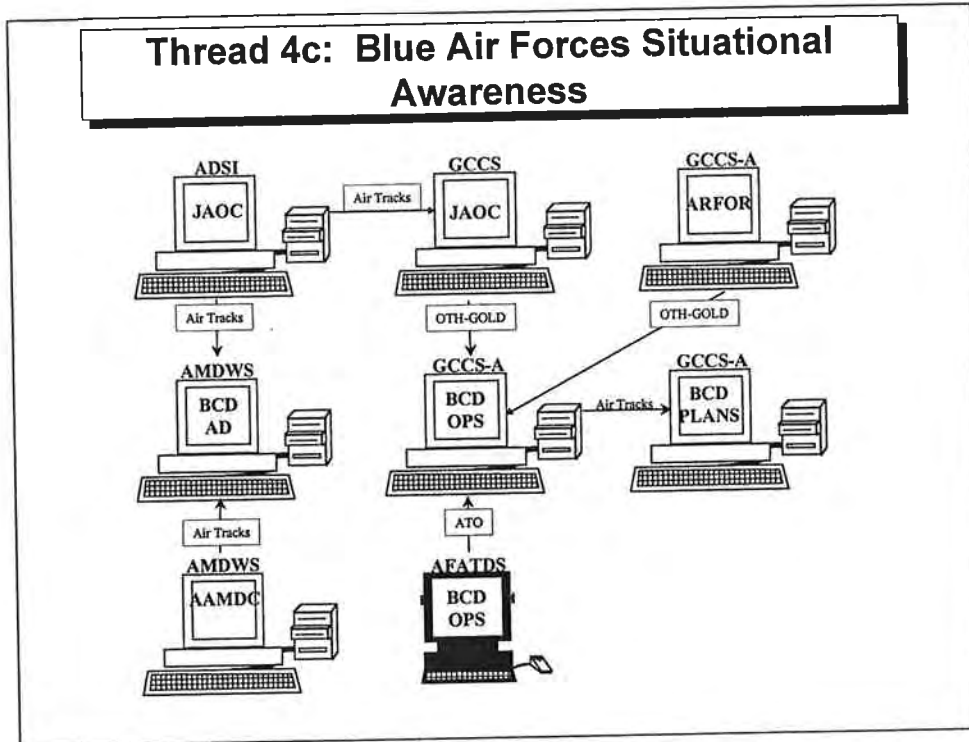|	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
Task #							
1	ARFOR DOCC	AFATDS	ACM Requests	ADP	BCD Plans	AFATDS	Check for completeness
2	BCD Plans	AFATDS	ACM Requests	E-Mail	BCD PLans	CTAPS	
3	JAOC	CTAPS	ACO	NA	BCD Plans	CTAPS	E-mail to AFATDS
4	BCD Plans	CTAPS	ACO	E-Mail	BCD Plans	AFATDS	Parse; Display Geom's
5	BCD Plans	AFATDS	ACO &S201	ADP	ARFOR DOCC	AFATDS	Parse; Display Geom's
6	BCD Plans	AFATDS	ACO &S201	ADP	BCD ASM	AFATDS	Parse; Display Geom's
7	BCD Plans	AFATDS	ACO &S201	ADP	BCD OPS	AFATDS	Parse; Display Geom's
8	BCD Plans	AFATDS	ACO &S201	ADP	BCD AD	AMDWS	Parse; Display Geom's

Table F.2 Thread 2: ACO Production
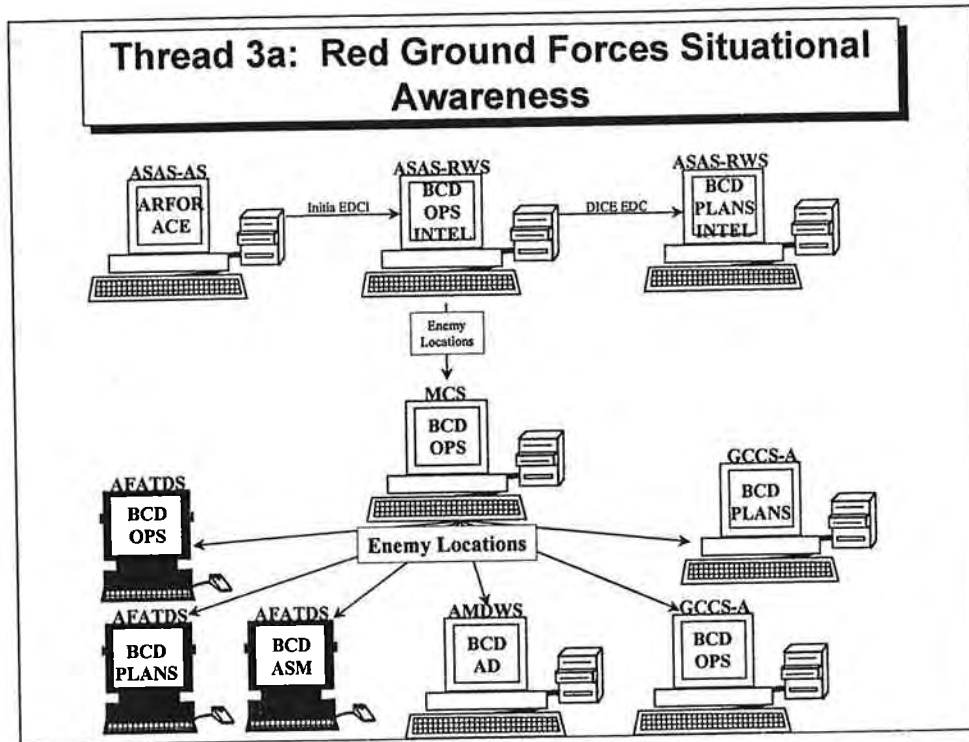
Figure F.3 Thread 3a: Red Ground Forces Situational Awareness

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
							Table F.3 Thread 3a: Red Ground Forces Situational Awareness
1	ARFOR ACE	ASAS-AS	EDC	No	BCD OPS	ASAS-RWS	Auto create S309
2	BCD OPS	ASAS-RWS	Enemy Locations	DICE	BCD PLANS	ASAS-RWS	
3	BCD OPS	ASAS-RWS	Enemy Locations	S309	BCD OPS	MCS	Auto forward to all BCD ABCS
4	BCD OPS	ASAS-RWS	Enemy Locations	S309	BCD OPS	AFATDS	Display, Filter
5	BCD OPS	AFATDS	Enemy Locations	ADP	BCD PLANS	AFATDS	Display, Filter
6	BCD OPS	AFATDS	Enemy Locations	ADP	BCD ASM	AFATDS	Display, Filter
7	BCD OPS	MCS	Enemy Locations	S309	BCD AD	AMDWS	Display, Filter
8	BCD OPS	MCS	Enemy Locations	S309	BCD OPS	GCCS-A	Correlates w/ GCCS COP
9	BCD OPS	MCS	Enemy Locations	S309	BCD PLANS	GCCS-A	

Thread 3b: Red Air Forces Situational Awareness
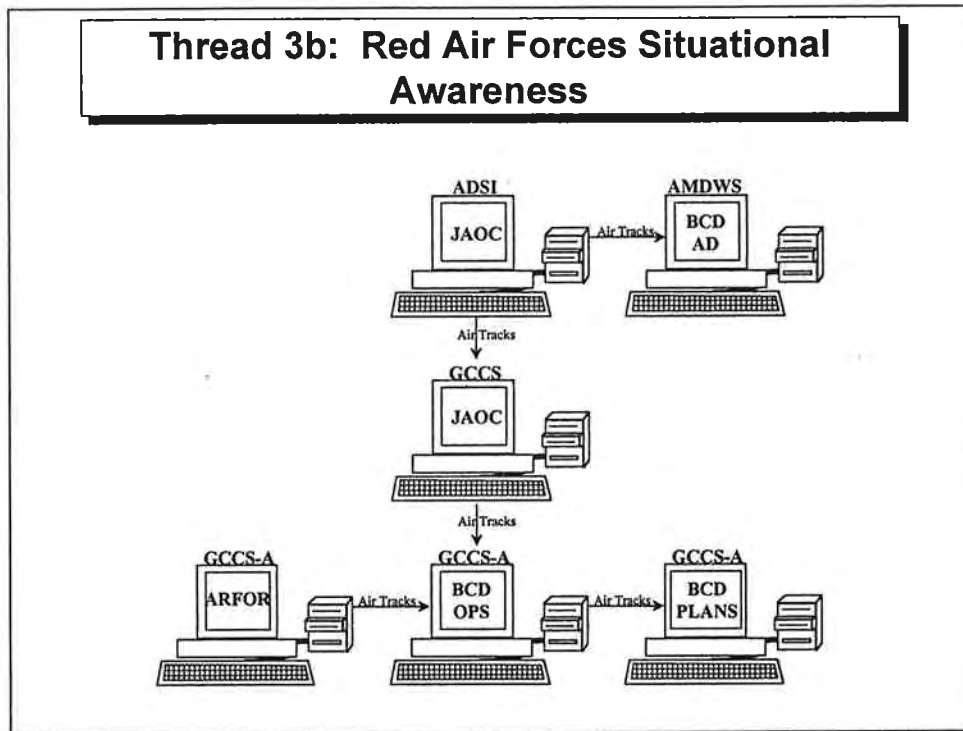
Figure F.4 Thread 3b: Red Air Forces Situational Awareness

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
				Table F.4 Thread 3b: Red Air Forces Situational Awareness			
1	JAOC	ADSI	Air Tracks	TADIL-B	BCD AD	AMDWS	Monitor; Active Defense
2	ARFOR	GCCS-A	Air Tracks	OTH-GOLD	BCD OPS	GCCS-A	
2	JAOC	ADSI	Air Tracks	TADIL-B	JAOC	GCCS	MDX Channel, Forward
3	JAOC	GCCS	Air Tracks	OTH-GOLD	BCD OPS	GCCS-A	
4	BCD OPS	GCCS-A	Air Tracks	NA	BCD PLANS	GCCS-A	
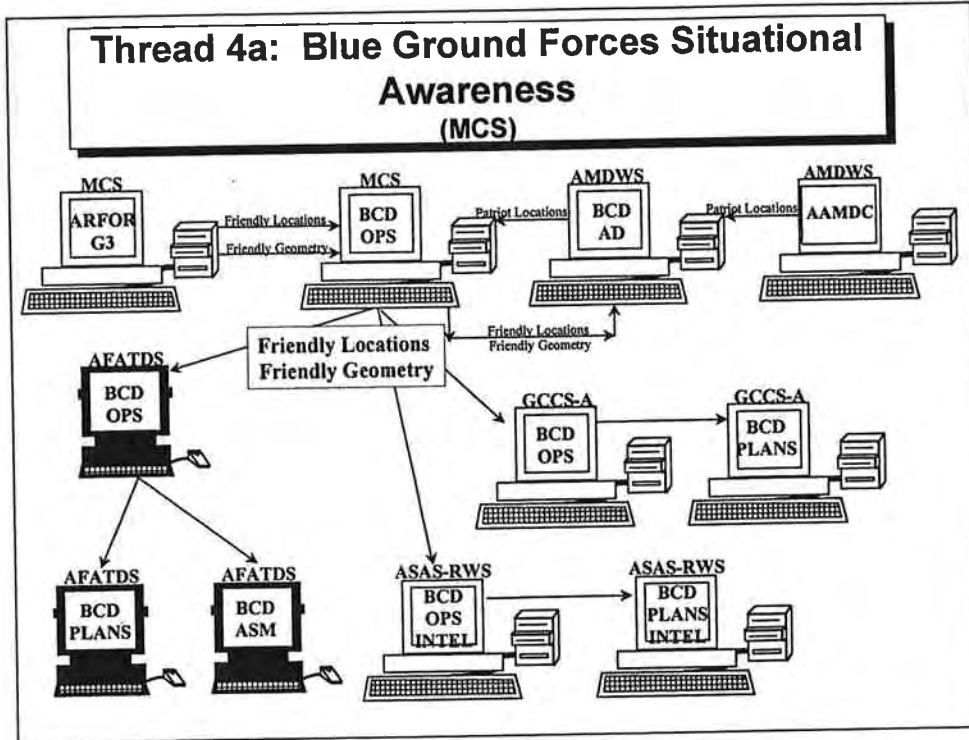
Figure F.5 Thread 4a: Blue Ground Forces Situational Awareness (MCS)

Table F.5 Thread 4a: Blue Ground Forces Situational Awareness (Source: MCS)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
1	ARFOR G3	MCS	Friendly Locations	S507L	BCD OPS	MCS	Auto forward to all BCD ABCS
2	BCD OPS	MCS	Friendly Locations	S507L	BCD OPS	ASAS-RWS	Display; Filter
3	BCD OPS	ASAS-RWS	Friendly Locations	S507L	BCD PLANS	ASAS-RWS	Display; Filter
4	BCD OPS	MCS	Friendly Locations	S507L	BCD OPS	AFATDS	Display; Filter
5	BCD OPS	AFATDS	Friendly Locations	ADP	BCD PLANS	AFATDS	Display; Filter
6	BCD OPS	AFATDS	Friendly Locations	ADP	BCD ASM	AFATDS	Display; Filter
7	BCD OPS	MCS	Friendly Locations	S507L	BCD AD	AMDWS	Display; Filter
8	BCD OPS	MCS	Friendly Locations	S507L	BCD OPS	GCCS-A	Correlates w/ GCCS COP
9	BCD OPS	GCCS-A	Friendly Locations	S507L	BCD PLANS	GCCS-A	Display
1	AAMDC	AMDWS	Patriot Locations	S507L	BCD AD	AMDWS	Forward to MCS for distro
2	BCD AD	AMDWS	Patriot Locations	S507L	BCD OPS	MCS	Auto forward to all BCD ABCS
3	BCD OPS	MCS	Patriot Locations	S507L	BCD OPS	ASAS-RWS	Display; Filter
4	BCD OPS	ASAS-RWS	Patriot Locations	S507L	BCD PLANS	ASAS-RWS	Display; Filter
5	BCD OPS	MCS	Patriot Locations	S507L	BCD OPS	AFATDS	Display; Filter
6	BCD OPS	AFATDS	Patriot Locations	ADP	BCD PLANS	AFATDS	Display; Filter
7	BCD OPS	AFATDS	Patriot Locations	ADP	BCD ASM	AFATDS	Display; Filter
8	BCD OPS	MCS	Patriot Locations	S507L	BCD OPS	GCCS-A	Correlates w/ GCCS COP
9	BCD OPS	GCCS-A	Patriot Locations	S507L	BCD PLANS	GCCS-A	Display
1	ARFOR G3	MCS	Friendly Geometry	S201	BCD OPS	MCS	Auto forward to all BCD ABCS
2	BCD OPS	MCS	Friendly Geometry	S201	BCD OPS	ASAS-RWS	Display
3	BCD OPS	ASAS-RWS	Friendly Geometry	S201	BCD PLANS	ASAS-RWS	Display
4	BCD OPS	MCS	Friendly Geometry	S201	BCD OPS	AFATDS	Display
5	BCD OPS	AFATDS	Friendly Geometry	ADP	BCD PLANS	AFATDS	Display
6	BCD OPS	AFATDS	Friendly Geometry	ADP	BCD ASM	AFATDS	Display
7	BCD OPS	MCS	Friendly Geometry	S201	BCD AD	AMDWS	Display
8	BCD OPS	MCS	Friendly Geometry	S201	BCD OPS	GCCS-A	Display
9	BCD OPS	GCCS-A	Friendly Geometry	S201	BCD PLANS	GCCS-A	Display
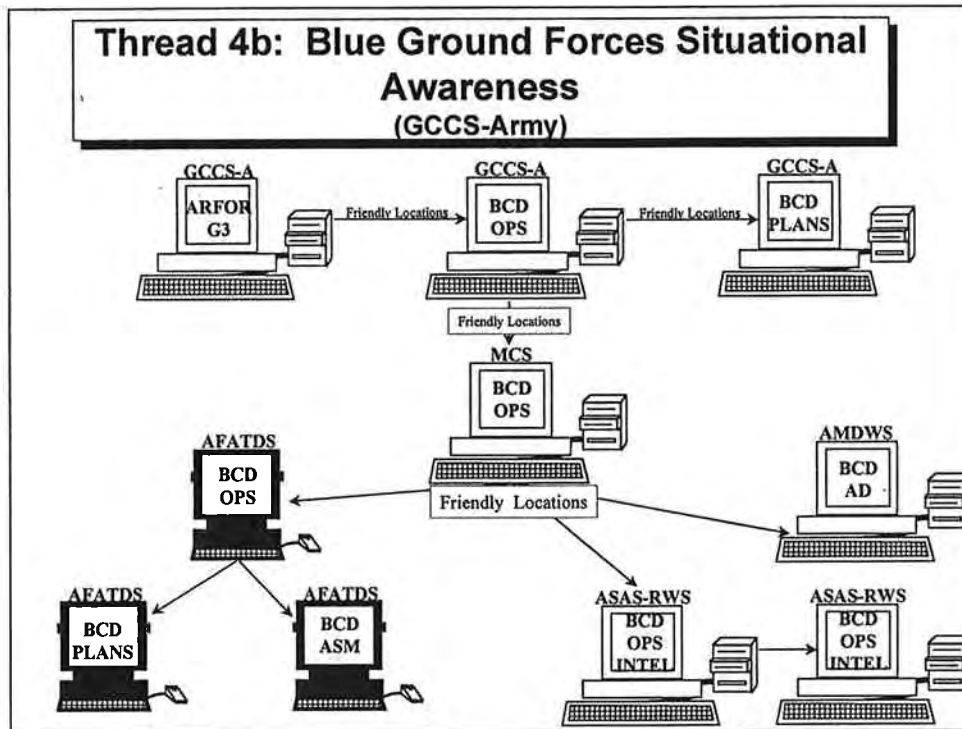
Figure F.6 Thread 4b: Blue Ground Forces Situational Awareness (GCCS-Army)

			Figure F.6 Thread 4b: Blue Ground Forces Situational Awareness (Source: GCCS-Army)				
Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
1	GCCS	GCCS	Friendly Locations	OTH-G	BCD OPS	GCCS-A	
2	BCD OPS	GCCS-A	Friendly Locations	S507L	BCD PLANS	GCCS-A	
3	BCD OPS	GCCS-A	Friendly Locations	S507L	BCD OPS	MCS	Auto forward to all BCD ABCS
4	BCD OPS	MCS	Friendly Locations	S507L	BCD OPS	ASAS-RWS	Display, Filter
5	BCD OPS	ASAS-RWS	Friendly Locations	S507L	BCD PLANS	ASAS-RWS	Display, Filter
6	BCD OPS	MCS	Friendly Locations	S507L	BCD OPS	AFATDS	Display, Filter
7	BCD OPS	AFATDS	Friendly Locations	ADP	BCD PLANS	AFATDS	Display, Filter
8	BCD OPS	AFATDS	Friendly Locations	ADP	BCD ASM	AFATDS	Display, Filter
9	BCD OPS	MCS	Friendly Locations	S507L	BCD AD	AMDWS	Display, Filter

Thread 4c: Blue Air Forces Situational Awareness

Figure F.7 Thread 4c Blue Air Forces Situational Awareness

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
1	ARFOR	GCCS-A	Air Tracks	OTH-GOLD	BCD OPS	GCCS-A	MDX Channel, Forwards
2	JAOC	ADSI	Air Tracks	TADIL-B	JAOC	GCCS	
3	JAOC	GCCS	Air Tracks	OTH-GOLD	BCD OPS	GCCS-A	
4	BCD OPS	GCCS-A	Air Tracks	-	BCD PLANS	GCCS-A	
5	BCD Opns	AFATDS	ATO	A659	BCD Opns	GCCS-A	Parse / Display ARFOR Tgts
6	BCD Opns	GCCS-A	Sorties for ARFOR Tgts	-	-	-	Color Code and Track Missions

Table F.7 Thread 4c: Blue Air Forces Situational Awareness
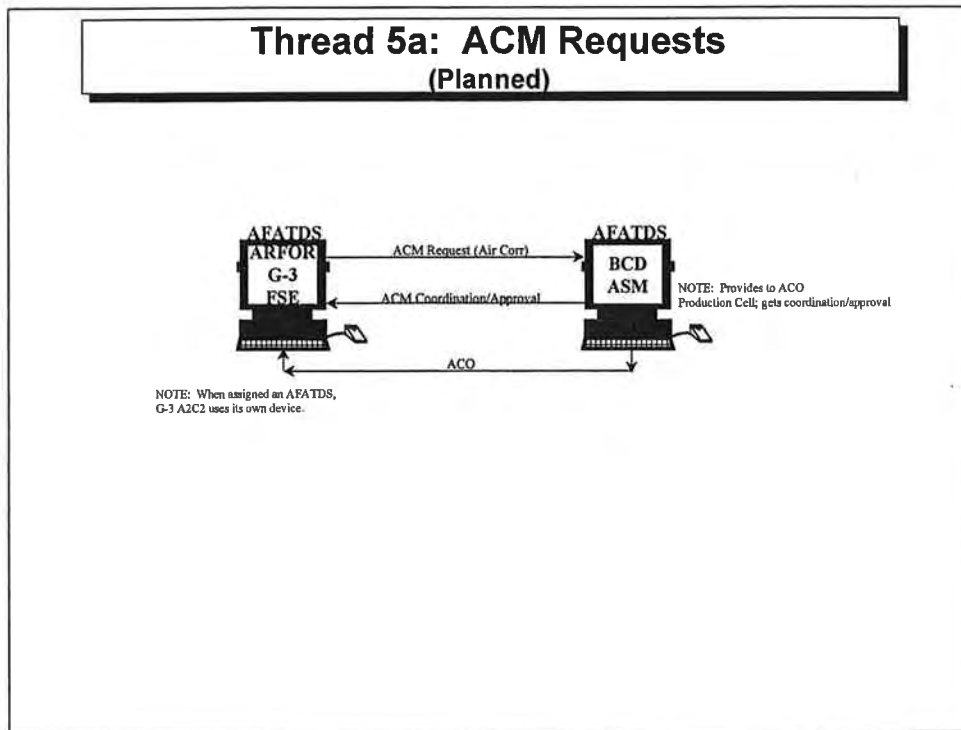
Figure F.8 Thread 5a: ACM Requests (Planned)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
			Table F.8 Thread 5a: ACM Request (Planned)				
1	ARFOR G3 FSE	AFATDS	ACM Request (Air Corr)	ADP	BCD ASM	AFATDS	Provides to ACO Production Cell; Gets Approval
2	BCD ASM	AFATDS	Free Text Msg (App, Disa)	ADP	ARFOR G3 FSE	AFATDS	Disseminates approval to subord's via AFATDS
3	BCD ASM	AFATDS	ACO	ADP	ARFOR G3 FSE/A2C2	AFATDS	Disseminates ACO to subordinates via AFATDS

Thread 5b: ACM Request
(Immediate Request After ACO Published)

ACM Request (Air Corr)

ACM Coordination/Notification

AFATDS ARFOR G3 FSE

AFATDS BCD ASM

NOTE: Hand-carries request for coordination

NOTE: When assigned an AFATDS, G-3 A2C2 uses its own device.
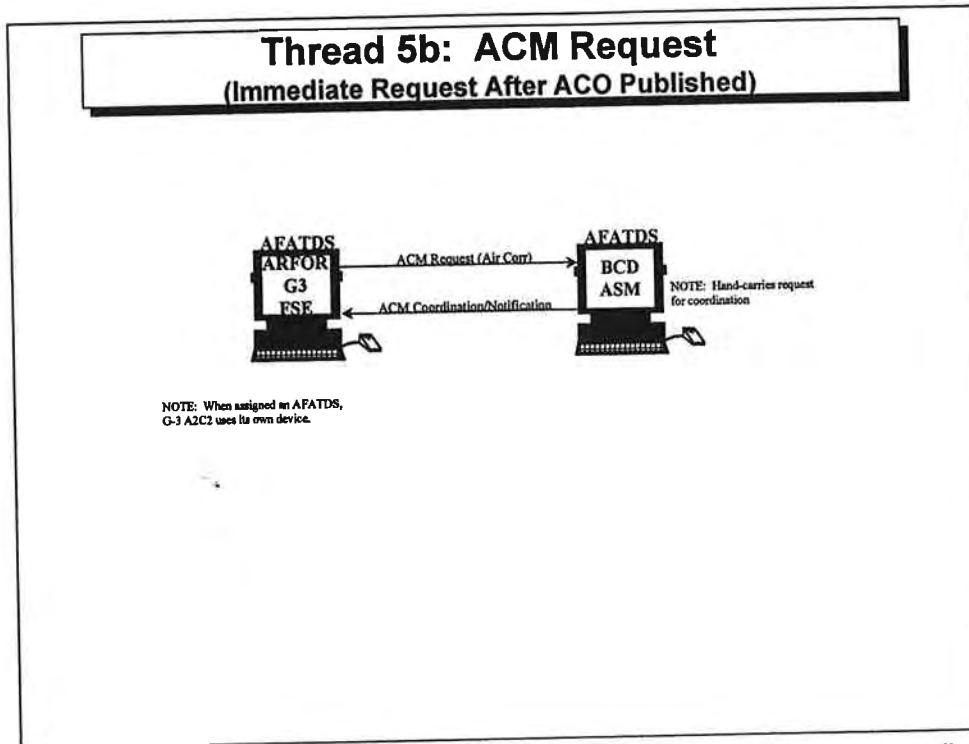
Figure F.9 Thread 5b: ACM Requests (Immediate Request After ACO Published)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
Table F.9 Thead 5b: ACM Requests (Immediate Request after ACO Published)							
1	ARFOR G3 FSE	AFATDS	ACM Request (Air Corr)	ADP	BCD ASM	AFATDS	Hand-carries coordination
2	BCD ASM	AFATDS	Free Text Msg (Coord)	ADP	ARFOR G3 FSE/A2C2	AFATDS	Passes notification to subord AFATDS
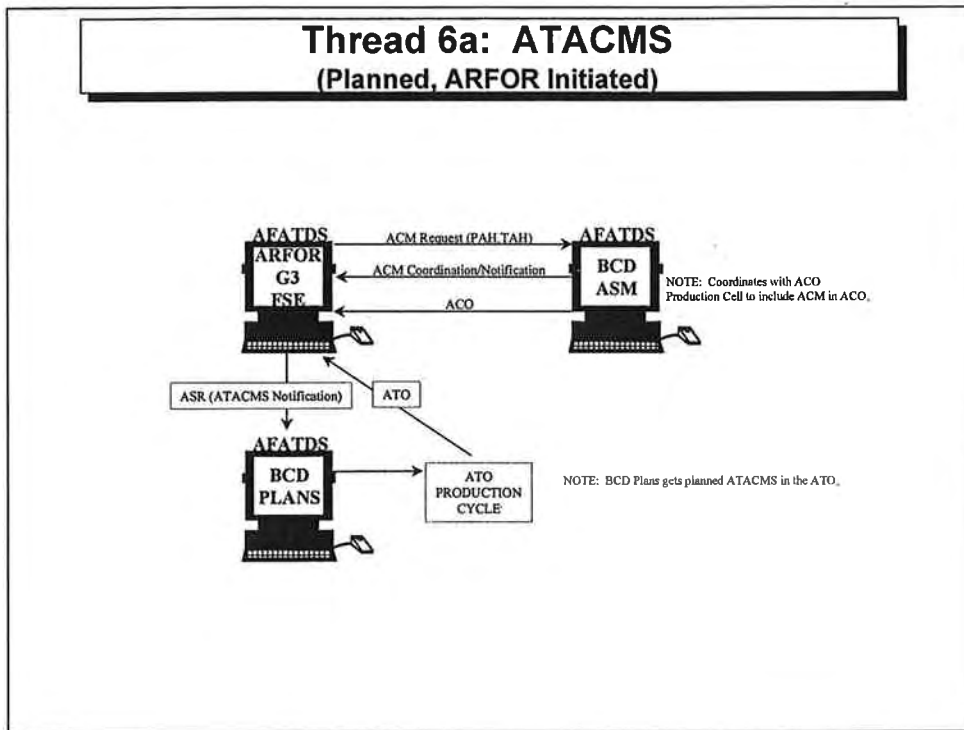
Figure F.10 Thread 6a: ATACMS (Planned, ARFOR Initiated)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
			Table F.10 Thread 6a: ATACMS (Planned, ARFOR Initiated)				
1	ARFOR G3 FSE	AFATDS	ACM Request (PAH, TAH)	ADP	BCD ASM	AFATDS	Coordinates w/ ACO Production Cell
2	BCD ASM	AFATDS	Free Text Msg (Coord)	ADP	ARFOR G3 FSE	AFATDS	Disseminates coordination to subord AFATDS
3	BCD ASM	AFATDS	ACO	ADP	ARFOR G3 FSE	AFATDS	Disseminates ACO to subordinates via AFATDS
4	ARFOR G3 FSE	AFATDS	ASR (ATACMS Notification)	ADP	BCD Plans	AFATDS	Notify ATO Production of ATACMS
5	BCD Plans	AFATDS	ATO	ADP	ARFOR G3 FSE	AFATDS	Disseminates ATO to subordinates via AFATDS
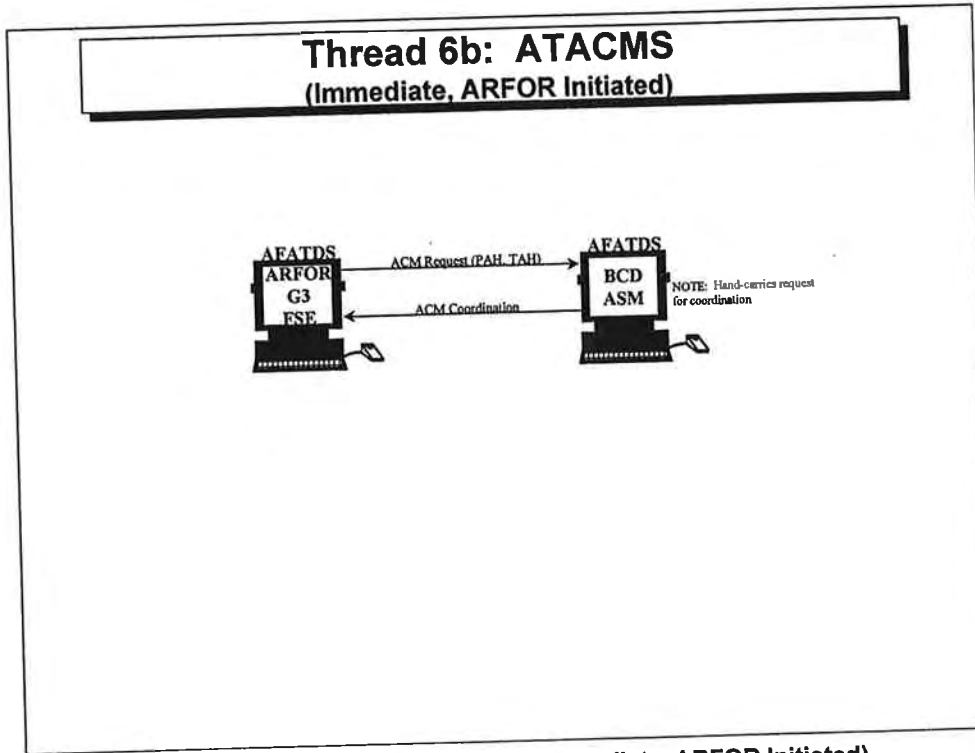
Figure F.11 Thread 6b: ATACMS (Immediate, ARFOR Initiated)

			Table F.11 Thread 6b: ATACMS (Immediate, ARFOR Initiated)				
Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
1	ARFOR G3 FSE	AFATDS	ACM Request (PAH,TAH)	ADP	BCD ASM	AFATDS	Hand-carries request for coordination
2	BCD ASM	AFATDS	Free Text Msg (Coord Info)	ADP	ARFOR G3 FSE	AFATDS	Pass coordination to subord AFATDS
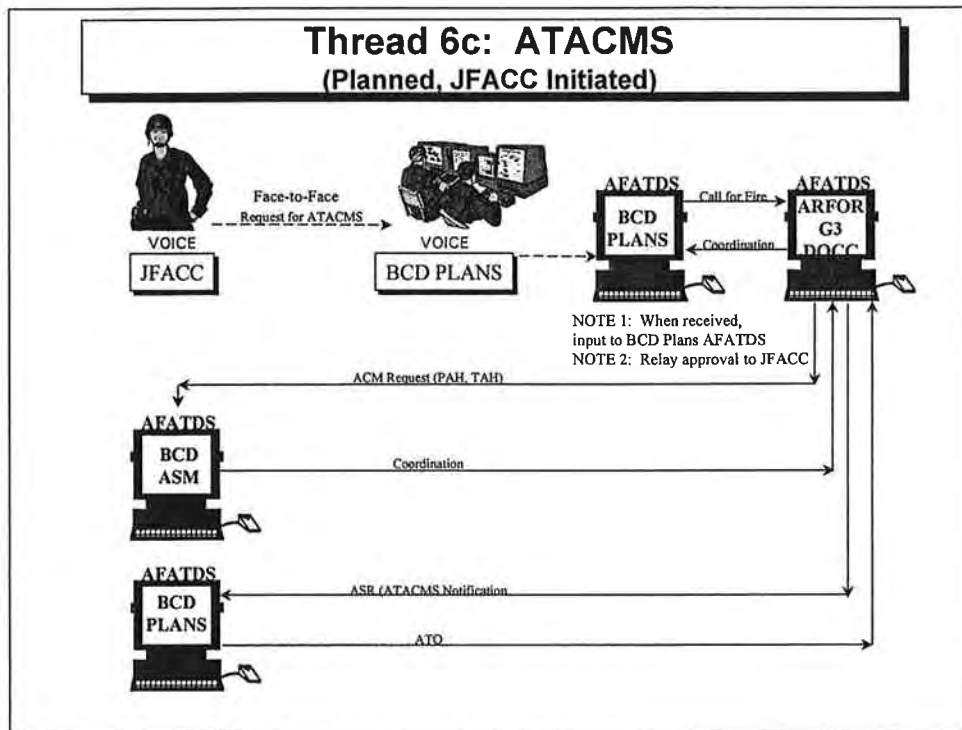
Figure F.12 Thread 6c: ATACMS (Planned, JFACC Initiated)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
1	JFACC	Voice	Request for ATACMS	NA	BCD Plans	Voice	Inputs request into AFATDS
2	BCD Plans	AFATDS	CFF	ADP	ARFOR DOCC	AFATDS	Determines App/Disapp
3	ARFOR G3 DOCC	AFATDS	Free Text Msg (App, Disapp)	ADP	BCD Plans	AFATDS	Relay Approval to JFACC
4	ARFOR G3 FSE	AFATDS	ACM Request (PAH, TAH)	ADP	BCD ASM	AFATDS	Coordinates w/ ACO Production Cell
5	BCD ASM	AFATDS	Free Text Msg (Coord)	ADP	ARFOR G3 FSE	AFATDS	Disseminates coordination to subord AFATDS
6	BCD ASM	AFATDS	ACO	ADP	ARFOR G3 FSE	AFATDS	Disseminates ACO to subordinates via AFATDS
7	ARFOR G3 FSE	AFATDS	ASR (ATACMS Notification)	ADP	BCD Plans	AFATDS	Notify ATO Production of ATACMS
8	BCD Plans	AFATDS	ATO	ADP	ARFOR G3 FSE	AFATDS	Disseminates ATO to subordinates via AFATDS

Table caption above table: **Table F.12 Thread 6c: ATACMS (Planned, JFACC Initiated)**
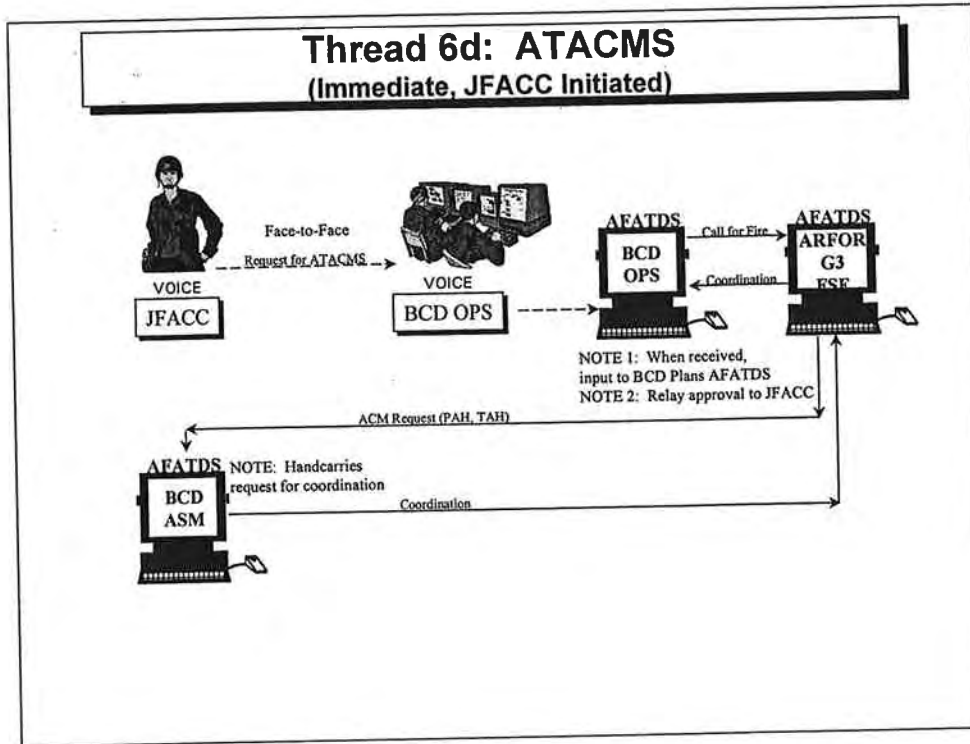
Figure F.13 Thread 6d: ATACMS (Immediate, JFACC Initiated)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
							Table F.13 Thread 6d: ATACMS (Immediate, JFACC Initiated)
1	JFACC	Voice	Request for ATACMS	NA	BCD OPS	Voice	Inputs request into AFATDS
2	BCD OPS	AFATDS	CFF	ADP	ARFOR G3 FSE	AFATDS	Determines Approval/Disapproval
3	ARFOR G3 FSE	AFATDS	Free Text Msg (Approval, Disapproval)	ADP	BCD OPS	AFATDS	Relay Approval to JFACC
4	ARFOR G3 FSE	AFATDS	ACM Request (PAH,TAH)	ADP	BCD ASM	AFATDS	Hand-carries request for coordination
5	BCD ASM	AFATDS	Free Text Msg (Coord Info)	ADP	ARFOR G3 FSE	AFATDS	Pass coordination to subord AFATDS
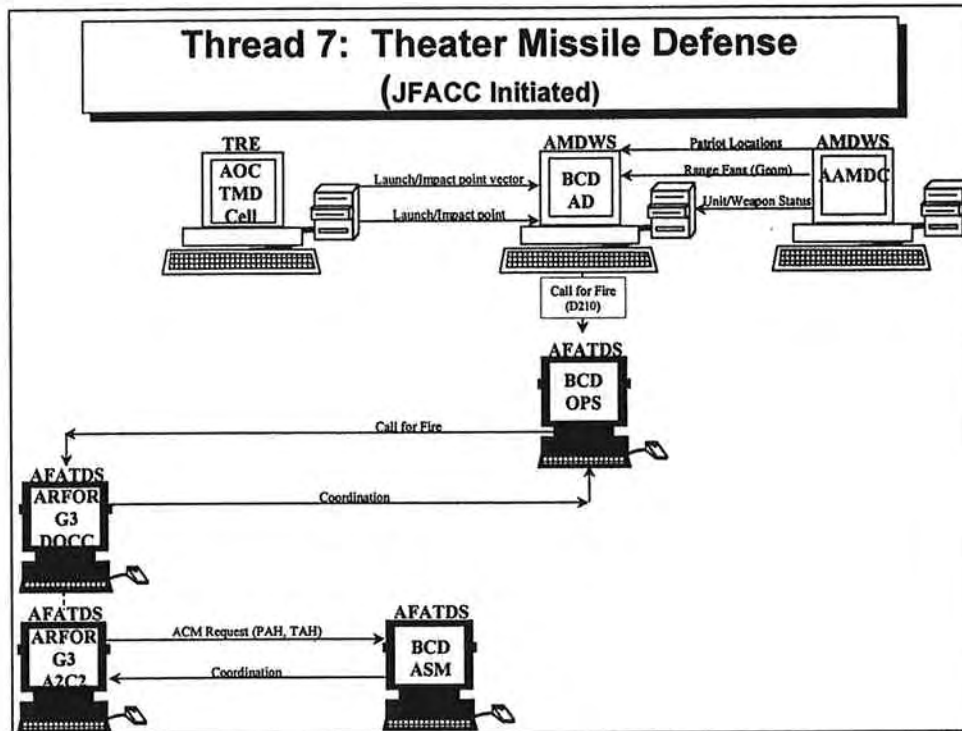
Figure F.14 Thread 7: Theater Missile Defense (JFACC Initiated)

Task #	Source Organization	Source Device	Information	USMTF	Destination Organization	Receiving Device	Action Taken
					Table F.14 Thread 7: Theater Missile Defense (JFACC Initiated)		
1	JAOC TMD Cell	ADSI TRE	Launch/Impact Pt, Vector	TIBS	BCD AD	AMDWS	Display; Analyze
2	JAOC TMD Cell	ADSI TRE	Launch/Impact Pt	TRAP	BCD AD	AMDWS	Display; Analyze
1	BCD AD	AMDWS	CFF	D210	BCD OPS	AFATDS	Forwards to ARFOR
2	BCD OPS	AFATDS	CFF	D210	ARFOR DOCC	AFATDS	Determines App/Dissapp
3	ARFOR G3 DOC	AFATDS	Free Text Msg (App, Disapp)	S302	BCD OPS	AFATDS	Relay Approval to BCD AD
4	ARFOR G3 A2C2	AFATDS	ACM Request (PAH,TAH)	S201	BCD ASM	AFATDS	Hand-carries request for approval
5	BCD ASM	AFATDS	Free Text Msg (App, Disapp)	S302	ARFOR G3 A2C2	AFATDS	Relay approval to subord's via AFATDS
1	AAMDC	AMDWS	Patriot Locations	S507L	BCD AD	AMDWS	Display Locations
2	AAMDC	AMDWS	Range Fans (Geom)	S201	BCD AD	AMDWS	Display Fans
3	AAMDC	AMDWS	Unit / Wpn Status	Update 7 Update P	BCD AD	AMDWS	Data Base
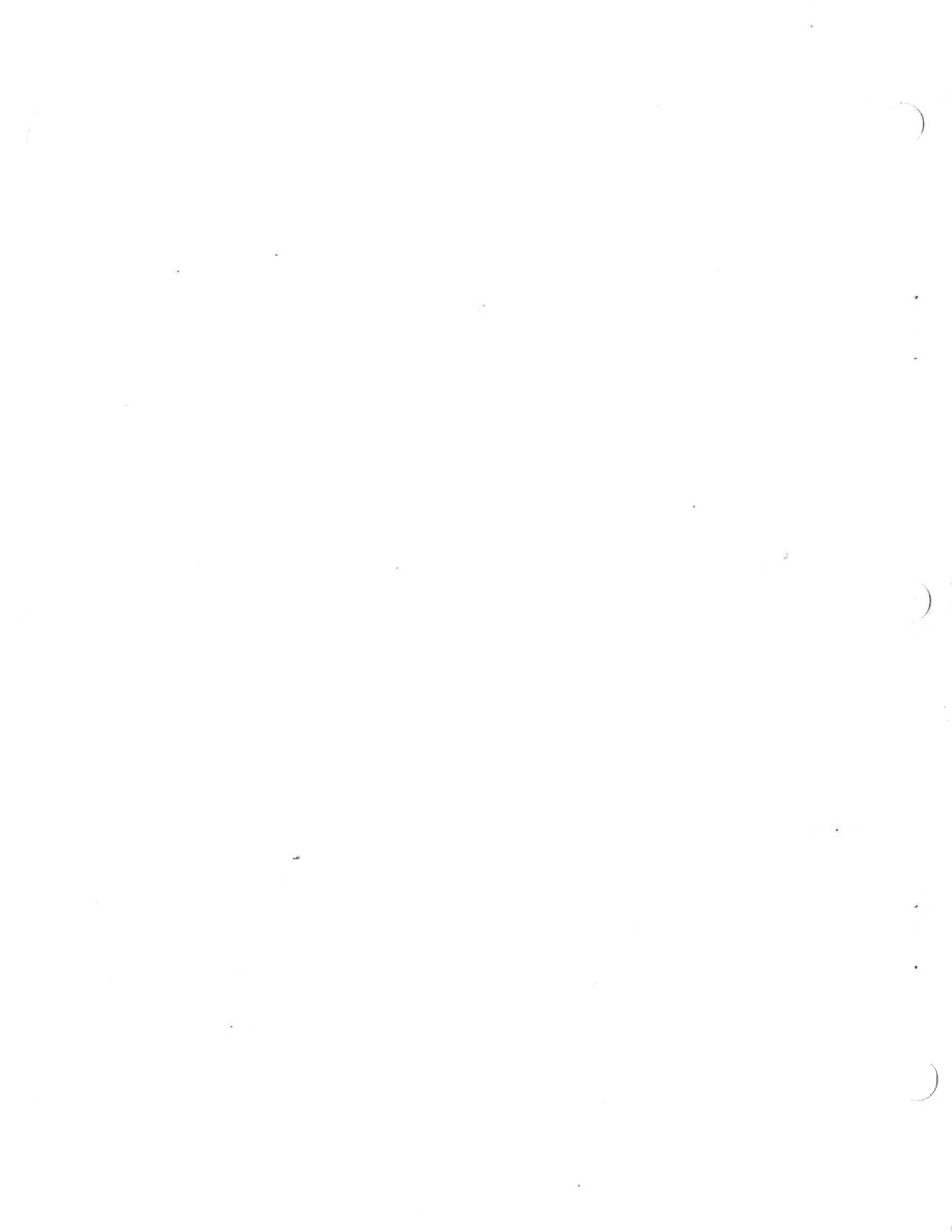
Appendix G

BCD Requests Of The ARFOR

With the introduction of the BCD's C4I suite of equipment, there are specific requests of the ARFOR to ensure success during preparation, equipment set-up and combat operations.

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

Units designated as the ARFOR must become familiar with the responsibilities and timelines required to meet ATO development and execution. FM 100-13 provides the basis for learning more about the ARFOR's roles in joint operations. Another technique is to invite the BCD to conduct a pre-deployment brief to outline the requirements.

- From the ARFOR G-2:
  - ➤ Digital map of the area of operation.
  - ➤ IP addresses for counterparts.
- From the ARFOR ACE:
  - ➤ IP addresses for counterparts.
  - ➤ Initial EDC for units, facilities and equipment along with any MIIDS/IDB.
- From the ARFOR G-3:
  - ➤ ARFOR digital map overlays.
  - ➤ Databases with ARFOR units' designations, UICs, locations, and timetables for arrival in country.
  - ➤ Digital package of air defense assets, location and orientation.
  - ➤ Digital location and designation of ATACMS units.
  - ➤ IP addresses for counterparts.
  - ➤ The digital ARFOR OPORD/OPLAN.

II. PRE-HOSTILITY, IN-THEATER TASKS.

Tasks completed in-theater to configure for operations and verify connectivity with all associated agencies within the ARFOR:

- Log-in/Addressing/Affiliation.
- Operational checks.

III. OPERATIONAL TASKS.

In addition to normal ARFOR / BCD interface, important considerations are:

See the individual chapters for specific tasks.

Appendix H

BCD Requests Of The JAOC

To effectively employ the BCD's C4I suite of equipment, the BCD will need additional support from the JAOC during mobilization, set-up, and combat operations. BCD personnel should work with JAOC staff to accomplish the following tasks:

I. PRE-DEPLOYMENT, HOME-STATION TASKS.

- Determine IP addresses for the BCD's counterparts' workstations.
- Determine the type of digital setup for C4I devices (i.e. parallel, series, optical cable, coax cable, etc).
- To the maximum extent possible, ensure all enemy units and significant targets are entered on the JTL prior to deployment.
- Basic Encyclopedia (BE) numbers should be assigned to all identified targets, mobile or stationary.

Note: BE numbers assigned to garrison headquarters locations may not apply to deployed units—these units should be assigned mobile BE numbers associated with their current battlefield location.

- Determine procedures for adding new targets and BE numbers to the JTL as needed.

II. PRE-HOSTILITY, IN-THEATER TASKS.

- Determine router information for critical C4I links/nodes.
- Verify IP addresses.
- Perform operational checks as part of the set-up process.

III. OPERATIONAL TASKS.

- When processing/entering ARFOR ASRs, RAAP operators should ensure the applicable Army Request Numbers are included. Failure to do so will result in loss of automated targets status update capability.
- Wherever possible, the BCD ASM should have a dedicated CTAPS workstation to allow timely processing of ARFOR ACM requests.
- BCD should have access to MISREPS flown against ARFOR-nominated targets. BDA should be available through intel databases.

See the individual chapters for section-specific tasks.

REFERENCES

I.   JOINT AND MULTISERVICE PUBLICATIONS.

JP 1-02. *Department of Defense Dictionary of Military and Associated Terms.* 23 MAR 94.

JP 2-0. *Doctrine for Intelligence Support to Joint Operations.* 5 MAY 95.

JP 3-0. *Doctrine for Joint Operations.* 1 FEB 95.

JP 3-01.5. *Doctrine for Joint Theater Missile Defense.* 30 MAR 94.

JP 3-05. *Doctrine for Joint Special Operations.* 28 OCT 92.

JP 3-17. *Joint Tactics, Techniques, and Procedures for Airlift Operations.* 18 JUL 95

JP 3-52. *Doctrine for Joint Airspace Control in the Combat Zone.* 3 DEC 93.

JP 3-56. *Tactical Command and Control Planning Guidance and Procedures for Joint Operations.* 1 APR 74.

JP 3-56.1. *Command and Control for Joint Operations.* 14 NOV 94.

JP 5-0. *Doctrine for Planning Joint Operations.* 13 APR 95.

JP 5-00.2. *Joint Task Force (JTF) Planning, Guidance and Procedures.* 3 SEP 91.

USAF Air Ground Operations School. *Advance Sheets, Book One, Blocks 1-3.* MAY 96.

USAF Air Ground Operations School. *Advance Sheets, Book One, Blocks 4-6 and Glossary.* MAY 96.

USAF Air Ground Operations School. *CTAPS Training COTC 96-10, Blue Flag Augmentee Course.* 16 SEP 96.

USAF Battlestaff Training School Blue Flag 96-4 Guide, 18-25 SEP 96.

USENTAF INSTRUCTION 10-105. *Air Operations Center Organization and Functions.* 8 FEB 96.

Draft Battle Rhythm Briefing Schedule, Blue Flag 96-4, 16 SEP 96.

II.   ARMY PUBLICATIONS.

FM 24-7(A). *Army Battle Command System (ABCS) Systems Management Techniques.* (Draft version 1, November 1996)

FM 100-5. *Operations.* 14 JUN 93.

FM 100-7. *Decisive Force: The Army in Theater Operations.* 31 MAY 95.

FM 100-13. *Battlefield Coordination Detachment (BCD)*. 5 SEP 96.

FM 100-25. *Doctrine for Army Special Operations Forces*. 12 DEC 91.

FM 100-103-2. *Multiservice Procedures for the Theater Air-Ground System (TAGS)*. OCT 94.

FM 101-5. *Staff Organization for Operations*. 25 MAY 84.

FM 101-5-1. *US Army Operational Terms and Graphics*. 21 OCT 85.

FM 34-25-3. *All-Source Analysis System and the Analysis and Control Element*. 3 OCT 95.

ARCENT Procedures and Responsibilities for the Planning, Synchronization, and execution of Deep Operations by 3rd US Army/Army Forces Central Command SOP. Not dated.

Intel Fusion Project Manager Information Briefing, 3 JUN 96.

LTC H. Alleyne Carter, *"Today's Air Tasking Process"*, FA Journal, May-June 1996.

III. CIVILIAN PUBLICATIONS.

Software User's Manual for the ASAS Remote Workstation (RWS), Volumes 1-6 (DRAFT). 20 APR 96.

USAFBTS Ground Unit Telecommunications System (GUTS) Unix User's Guide, 12 JUN 96, DynTel Corporation.

IV. E-MAIL ADDRESSES.

Joint Publications Homepage: www.dtic.ml/doctrine/jel/jointpub.htm

Army Training Digital Library: www.atsc-army.org/atdls.html

General: www.hqda.army.mil/webs/techarch/

AGCCS: www.stccs-home.army.mil/#orgstruc

ASAS: www.army.mil/pmif-pg/index.htm

AFATDS: http://hiway1.exit109.com/~fatds/afatds.htm

MCS/P: http://134.80.72.74/

AMDWS: None available

GLOSSARY

A	
A/DACG	arrival and departure airfield center group
A2C2	Army Airspace Command and Control
AADC	Area Air Defense Commander
AAMDC	Army Air and Missile Defense Command
AAR	after action review
ABCS	Army Battlefield Control System
ACA	airspace control authority
ACE	analysis and control element
ACM	airspace coordination measure
ACO	airspace coordination order
ACP	airspace control plan
AD	air defense
ADA	air defense artillery
ADCCS	air defense command and control systems
ADE	air defense element
ADRG	ARC digitized raster graphics
ADS	Airspace Deconfliction System
ADSI	Air Defense System Integrator
AFATDS	Advanced Field Artillery Tactical Data System
AFB	air force base

AFFOR	Air Force headquarters
AGCCS	Army Global Command and Control System
AGOS	Air Ground Operations School
AI	air interdiction
AIRLIFTREQ	airlift request
ALCC	airlift coordination cell
AMDWS	Air and Missile Defense Workstation
AME	air mobility element
AMES	ATO mission entry system
AMHS	automated message handling system
AML	air mission list
AMS	air mission schedule
ARFOR	Army Force headquarters
ASAS	All Source Analysis System
ASAS-AS	ASAS-All Source
ASAS-RWS	ASAS-Remote Workstation
ASC	air status chart
ASCII	American Standard Code 2
ASL	air status list
ASM	airspace management section
ASOC	air support operation center
ASR	air support request
ATACMS	Army Tactical Missile System
ATCCS	Army Tactical Command and Control System

ATL	alternate target list
ATMDE	Army Theater Missile Defense Element
ATO	air tasking order
ATOCONF	ATO conference
ATS	air traffic service

B

BCD	Battlefield Coordination Detachment
BDA	battle damage assessment
BDZ	base defense zone
BE	basic encyclopedia (number)
BFA	battlefield functional area

C

C2	command and control
C2IPS	Command and Control Information Planning System
C3	command, control, and communications
C4I	command, control, communications, computers, and intelligence
CAS	close air support
CCO	Commander, Combat Operations
CD ROM	compact disk read only memory
CECOM	Communications Electronics Command
CESP	civil engineering support
CFF	call for fire
CHRONOLOG	chronological log

CID	combat intelligence division
CINC	Commander-in-Chief
COID	combat operations intelligence division
COMARFOR	Commander Army Forces
COP	common operational picture
CRC	control and reporting center
CSS	combat service support
CSSCS	Combat Service Support Control System
CTAPS	Contingency Theater Automated Planning System
CTL	candidate target list

D

DART	Dynamic Analysis and Replanning Tool
DFAD	digital feature analysis data
DIA	Defense Intelligence Agency
DIRMOBFOR	Director of Mobility Forces
DISA	Defense Information Systems Agency
DISE	deployable intelligence support element
DISUM	daily intelligence summary
DMA	Defense Mapping Agency
DMP	dot matrix printer
DNS	domain net server
DOCC	Deep Operations Coordination Cell
DOD	Department of Defense

DSABL	Depth and Simultaneous Attack Battle Lab	FSE	fire support element
DSN	defense switched network	FTP	file transfer protocol

		G	
DTED	digital terrain elevation data	GAT	guidance apportionment and targeting
DZ	drop zone	GB	giga-byte(s)
		GCCS	Global Command And Control System

E	

EDC	electronic database coordination	GCCS-Army	Global Command and Control System-Army
E-mail	electronic mail	GIQ	GSORTS application information query
EP	electronic printer	GLO	Ground Liaison Officer
EPB	Electronic Preparation of the Battlefield	GOB	Ground Order of Battle
ETUT	Enhanced Tactical Users Terminal	GSORTS	GCCS status of resources and training system
EUT	early user test		
EVAC	evacuation file maintenance and retrieval system		
EW	electronic warfare		

	H

		HDD	hard disk drive
		HPT	high payoff target
		HVT	high value target

F	

	I

FAADC2I	Forward Area Air Defense Command and Control System	IEW	Intelligence/ Electronic Warfare
FAPES	Force Augmentation Planning And Execution System	IFF	Identification Friend or Foe
FAX	facsimile	IFSAS	Initial Fire Support Automation System
FLOT	forward line of own troops	INTEL	intelligence
FM	field manual	INTELINK-S	Intelligence Web Pages linked by DIA
FOMAU	fiber optic medium attachment unit	INTSUM	Intelligence Summary
FRAGO	fragmentary order	IP	Internet Protocol
FS	fire support		
FSCL	fire support coordination line		
FSCM	fire support coordination measure		

IPB	Intelligence Preparation of the Battlefield	J-STARS	Joint Surveillance And Target Attack Radar System
IRC	Internet Relay Chatter	JTCB	joint targeting coordination board
ISSO	Information Special Security Officer	JTL	joint target list
ITO	integrated tasking order		

K, L

LAN	local area network
LAT/LONG	latitude/longitude
LNO	liaison officer
LOGSAFE	logistics sustainment analysis and feasibility estimator
LZ	landing zone

J

JAAT	Joint Air Attack Team
JAOC	Joint Air Operation Center
JAOSC	Joint Air Operations Staff Course
JCOE	joint common operating environment
JDISS	Joint Deployable Intelligence Support System
JEPES	Joint Engineering Planning And Execution System
JFACC	Joint Force Air Component Commander
JFAST	Joint Flow and Analysis System for Transportation
JFC	Joint Force Commander
JGAT	Joint Guidance, Apportionment and Targeting
JIPTL	Joint Integrated Prioritized Target List
JMCC	Joint Movement Control Center
JMCIS	Joint Maritime Command Information System
JOPES	Joint Operations, Planning And Execution System

M

MAAP	master air attack plan
MB	megabyte(s)
MCS	Maneuver Control System
MDC	missile defense command
MHE	material handling equipment
MIIDS/IDB	Military Intelligence Integrated Data System/Integrated Database
MISREP	mission report
MOA	memorandum of agreement
MOU	memorandum of understanding
MOS	military occupational specialty
MS	Microsoft
MSE	Mobile Subscriber Equipment
MSEU	mass storage expansion unit

N

NAI	named area(s) of interest
NAVAIDS	navigational aids
NBC	nuclear, biological, chemical
NCO	noncommissioned officer
NET	new equipment training
NETT	new equipment training team
NGAT	night guidance, apportionment, and targeting
NGF	naval gunfire
NGLO	Naval Gunfire Liaison Officer
NITF	national imagery transmission format
NSF	naval surface fire (new for naval gunfire)

O

OCOKA	observation and fields of fire, cover and concealment, obstacles, key terrain, avenues of approach
OPM	Office of the Program Manager
OPORD	operations order
OPTADS	Operations Tactical Data System
OPTASKLINK	operational task link
OS	operating system
OSA	operational support airlift

P

PAH	platoon airspace hazard
PC	personal computer
PC/UPS	power converter/ uninteruptible power supply
PIR	priority intelligence requirements
PLOG	position log
PM	Program Manager
POC	point of contact
PSYOP	psychological operations
PZ	pick-up zone

Q, R

RAAP	rapid application of airpower
RAM	random access memory
RAPIDE	Relocatable Army Processors For Intelligence Data Europe
RDA	requirements decision analyzer
RECCE	reconnaissance
ROE	rules of engagement
ROZ	restricted operational zone
RPV	remotely piloted vehicle
RREM	run remote

S

S&M	scheduling and movement
SAAFR	standard army aviation flight route
SADO	Senior Air Defense Officer
SAM	surface-to-air missile
SCC	site control center

SCI	sensitive compartmented information	TAI	target area(s) of interest
SCSI	small computer system interface	TAMCA	Theater Army Movement Control Agency
SEAD	suppression of enemy air defense	TAR	tactical air request
		TARGET	theater analysis and replanning graphical execution toolkit
SEMA	special electronic mission aircraft	TARL	tactical air request list
SHRD	super high resolution display	TASM	tactical air support module
SIF	special identification feature	TB	technical bulletin
		TBD	to be determined
SITMAP	situation map	TBM	tactical ballistic missile
SITREP	situation report(s)		
SOCCE	Special Operations Coordination Cell Element	TBP	to be published
		TCIM	tactical communications interface module
SOCOORD	Special Operations Coordinator	TCU	transportable computer unit
SOF	Special Operations Forces	TIBS	tactical information broadcast service
SOLE	Special Operations Liaison Element	TIDAT	target intelligence data
SOP	standing operating procedure	TM	technical manual
SPINS	special instructions	TMD	theater missile defense
SSO	stability and support operations	TNL	target nomination list
SSP-S	single-source processor, army C3I	TOC	tactical operations center
STU	secure telephone unit	TOT	time on target
		TPFDD	time phased force deployment data
		TRAP	Tactical Related Applications
	T	TRE	tactical receive equipment
TAADE	Theater Army Air Defense Element	TSM	TRADOC System Manager
TACSIM	tactical simulation	TSS	target selection standards
TADIL	tactical digital information link	TTP	tactics, techniques, and procedures
TAH	target airspace hazard		

U

UAV	unmanned aerial vehicle
UHF	ultra high frequency
UIC	unit identification code
UPS	uninterruptible power supply
USAF	US Air Force
USAFAS	US Army Field Artillery School
USMC	US Marine Corps
USMTF	US message text format
USN	US Navy
UTARL	unsupported tactical air request list
UTM	universal transverse mercator (system)
UTO	unit tasking order

V, W

WAN	wide area network
WCS	weapons control status
WEZ	weapons engagement zone
WOC	wing operations center
WS	workstation
WVS	world vector shoreline

X, Y, Z

ZOR	zone of responsibility

INDEX

Q, R

S

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
04387

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: To be distributed in accordance with the initial distribution number 115745, requirements for FM 100-13-1.