

CHAPTER 2

COSCOM Command and Control of Support Operations

The COSCOM functions as the major subordinate command of the corps responsible for the direction and management of logistics and medical support for the corps. COSCOM headquarters staff officers coordinate and supervise the implementation of corps policies and directives relative to support of current and future operations. They develop plans and orders to ensure continuous logistics support of corps operations. The fluidity of battle demands constant changes to these support plans.

This chapter covers command and control from a COSCOM perspective. It describes the COSCOM HHC and how COSCOM staff officers integrate and coordinate with corps and CSG counterpart staff personnel. It also describes how the COSCOM headquarters staff uses automation and communications devices to accomplish the COSCOM's support mission.

CONTENTS

	Page
COMMAND AND CONTROL	2-1
COMMAND POSTS	2-9
COSCOM HEADQUARTERS AND HEADQUARTERS COMPANY	2-14
COSCOM HHC AUTOMATION SUPPORT	2-18
COSCOM HHC COMMUNICATIONS SUPPORT	2-26

**COMMAND AND CONTROL**

For the COSCOM, C2 consists of coordinating and integrating personnel, equipment, facilities, communications, and procedures to accomplish the mission under the COSCOM commander's guidance and in compliance with the corps commander's intent. If the COSCOM headquarters is the senior logistics headquarters in the theater, it must be augmented in those areas in which it lacks staff expertise. For example, the COSCOM headquarters staff might need to be augmented with comptroller and resource management staff officers or with additional transportation staff to enable it to oversee port clearance and terminal operations.

CORPS COMMANDER'S INTENT

The corps commander's intent is a statement of the desired end product of an engagement or battle. It clarifies the purpose of the operation. It needs to be stated in enough detail to ensure unity of effort and appropriate action by subordinates.

COSCOM COMMANDER'S ESTIMATE AND INTENT

Based on his staff's estimates and recommendations, the COSCOM commander decides how to best accomplish the COSCOM's mission and publishes his intent through the COSCOM OPORD.

COSCOM Commander's Estimate

COSCOM coordinating and special staffs prepare staff estimates which analyze factors that could impact on accomplishment of the mission. Their estimates result in recommendations concerning the feasibility of various courses of actions and the effects of each course of action on mission accomplishment.

The COSCOM commander then uses the commander's estimate to compare the feasible courses of action, their advantages and disadvantages or significant factors. He then decides on the best course of action to execute the COSCOM's mission in support of the operation. FM 101-5 describes the basic format and content of the commander's estimate.

COSCOM Commander's Intent

The COSCOM commander states his intent in the COSCOM OPORD. His statement of intent focuses on supporting the corps commander's intent by sustaining corps soldiers and arming fueling fixing and moving corps forces in support of the operation. His staff uses the statement of intent to develop plans as to how to provide that support.

CSS ESTIMATE

The CSS estimate provides a means for COSCOM support operations staff to analyze the feasibility of

various courses of action which effect accomplishment of the COSCOM's external support mission.

Intelligence and operations staff officers provide information on the intelligence and tactical situation and their impact on mission support. Personnel staff officers provide present and projected personnel data which will influence support operations.

Support operations subordinate branch staff officers provide input on the current support status, capability, and support problems. They compare the advantages and disadvantages of each course of possible action. They then determine the major logistics deficiencies that must be brought to the commander's attention. Finally, they recommend the courses of action which can best be supported and ways to reduce logistics deficiencies.

RISK-BENEFIT ANALYSIS

CSS commanders and staff officers must recognize that in planning the logistics support for combat operations they need to perform logistics risk analyses. They need to continuously balance the benefits derived from a particular support concept versus the risks involved in the support provided. They must ask themselves if the concept is supportable and if the responsiveness of the support provided outweighs the risks involved. The corps G3 must be kept informed of the results of this analysis so that sound and timely decisions can be made.

There is no question that the risks involved depend to a great extent on the circumstances prevailing at the time. There are no hard and fast rules to assist the planner. Each time the support operations staff officer must assess the circumstances, measure the risk, and decide upon the best course of action.

The location of support areas is one example of a CSS risk analysis. In order to provide the required support, will it be necessary to locate CSS activities within the range of enemy artillery? There is clearly a risk involved here. However, it may be necessary to assume the risk if that is the only way that critical support can be provided.

The circumstances requiring a risk-benefit analysis cannot be identified in advance. Therefore, it is incumbent upon all CSS commanders and staff planners to recognize that in combat every action contemplated must be subjected to a logistics risk analysis. Only after the risk-benefit analysis is completed can the planner be assured that the available CSS resources will be applied in the most effective manner possible. The analysis must also consider the additional resources

needed if personnel are required to operate in MOPP due to the NBC threat or the presence of NBC contamination.

COSCOM OPERATION PLANS/ORDERS

COSCOM OPLANs/OPORDs provide the COSCOM's general mission guidance. To ensure clarity, subparagraphs of the execution paragraph prescribe specific support to be provided by subordinate commands. They prescribe the support to be provided, where and how it will be provided, and the priority of that support. Commanders of subordinate commands ensure compliance with the provisions of COSCOM OPLANs/OPORDs.

The COSCOM OPLAN/OPORD repeats the priority of support listed in paragraph four of the corps OPLAN/OPORD. This provides instructions to subordinate units on where to place the priority of their support. Appendix F provides a sample COSCOM OPORD.

OPLANs are the responsibility of the ACofS, G3's force design/plans branch and support operations section's CSS plans branch. OPORDs are the responsibility of the ACofS, G3's operations branch. Coordinating and special staff prepare paragraphs or annexes and supporting documents and overlays. The force design/plans branch of the ACofS, G3 section publishes COSCOM OPLANs/OPORDs. An OPLAN can be easily converted to an OPORD via a fragmentary order stating to execute the OPLAN with noted changes.

The OPORD is based on the format prescribed by FM 101-5 and NATO STANAG 2014. This format uses the time zone of the area of operations. The title of paragraph four is Service Support. In contrast, the format prescribed by QSTAGs uses Greenwich Mean Time throughout the order and the title of paragraph four is Administrative Logistics.

CORPS SERVICE SUPPORT PLANS AND ORDERS

Corps service support plans and orders prescribe logistics support missions. They provide for coordinated CSS and administrative movements. Paragraphs or annexes provide information and instructions on materiel and services, medical evacuation and hospitalization, personnel, and civil-military operations. They provide information on the policies and procedures of support and where to obtain it. FM 101-5 describes format and content.

COSCOM support operations staff officers provide input on the logistics portions of the corps service support plans and orders based on corps G4 policy in paragraph four of the corps OPORD. The CMCC provides the corps highway regulation plan. The COSCOM develops a service support annex to enable subordinate groups/brigades to better implement the plans and orders of corps headquarters. Appendix G provides a sample of a COSCOM service support annex.

CSSCS software assists support operations staff with providing input to the corps service support plan/order. It provides a fill in the blanks type format for support operations staff officers to complete. CSSCS also enables G3/S3 staff officers to transmit published COSCOM orders and plans to individual or multiple addresses.

COMMAND AND STAFF RELATIONSHIPS

Command relationships that exist between the COSCOM headquarters and corps headquarters as well as its subordinate centers, groups/brigades and units are described below.

Corps Headquarters

Corps headquarters issues mission type orders to the COSCOM. Its staff prepares broad plans and guidance for support of anticipated operations. COSCOM staff officers develop detailed plans, policies, and directives for logistics support of the corps and allies or other Services which conform with corps policies, directives, and guidance.

Figure 2-1 depicts the corps headquarters staff with whom COSCOM staff primarily interface. The corps G3 and G4 determine priorities for logistics support of tactical operations. COSCOM staff officers coordinate and supervise the implementation of corps policies and priorities for support of current and future operations. They consolidate, analyze, and transmit changes in logistics support status and situation to their counterparts in the corps headquarters.

Table 2-1 lists areas of staff interaction with corps main and rear CP cells. COSCOM ACofS, G3 and support operations staff officers coordinate with corps headquarters staff to ensure integration of CSS and supportability of future operations. They ensure that corps planners understand the impact of the COSCOM's capability to support current and future operations.

Subordinate Control Centers

The COSCOM headquarters accomplishes centralized control and management through its subordinate functional control centers. Both the CMMC and CMCC operate under the staff supervision of the COSCOM support operations officer. CMMC and CMCC staff officers coordinate with support operations subordinate branch staffs and with their respective counterparts in separate brigade support battalions, the DMMC or division DTO, TAACOM MMC, and TAMMC and TAMCA.

Subordinate Groups/Brigades

The COSCOM commands and controls assigned and attached units through its subordinate groups/brigades. Its command section coordinates command and policy matters with subordinate groups/brigades through command channels. FM 101-5 prescribes inter and intra staff relationships.

Figure 2-2 depicts the counterpart staff relationship between COSCOM staffs and subordinate CSGs staffs. COSCOM general staff officers exercise staff supervision to ensure compliance with COSCOM policies. COSCOM support operations staff officers maintain informal liaison with their counterparts in subordinate commands relative to their technical area of interest.

While subordinate battalion staff officers supervise the day-to-day mission support activities of their subordinate companies, group and brigade staff officers focus on logistics support within their mission area. Group or brigade staffs ensure that their subordinate battalions receive support required to enable them to perform their missions.

Subordinate Units

The COSCOM commands, controls, and supervises all assigned and attached units and activities. Staff relationships are listed below

- Support operations staff coordinates the movement and positioning of logistics units with the CMCC/DTO and area RAOC.
- ACofS, G3 section personnel track the reception and forward employment of the down trace.
- ACofS, G4 section personnel assist subordinate unit headquarters with information and guidance on the use and availability of facilities. They submit requirements to the corps G3 for corps engineer support.
- ACofS, G3 staff officers submit requirements to

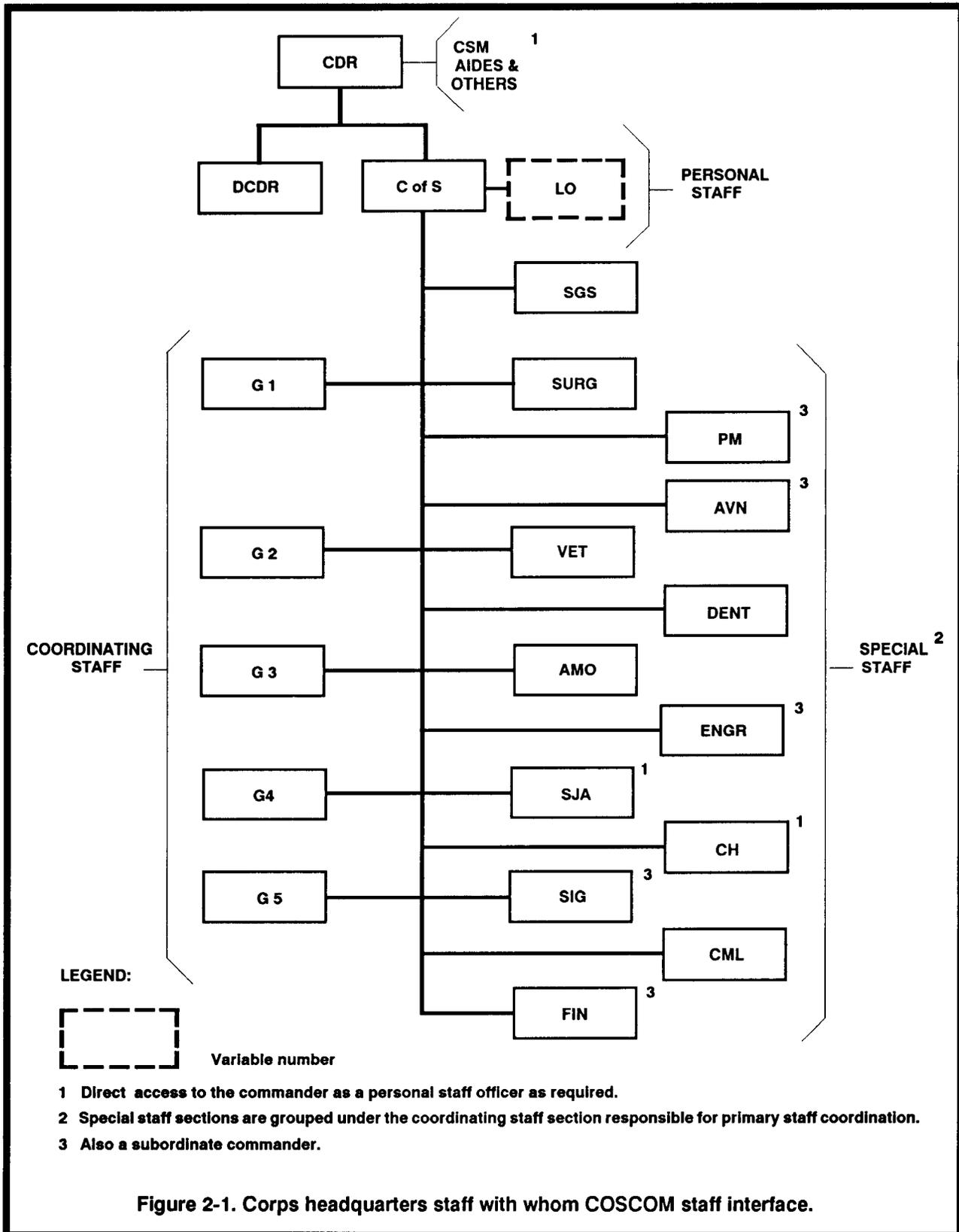


Table 2-1. COSCOM staff interaction with corps main and rear CP cells.

INTERFACE WITH CORPS REAR CP		
COSCOM ELEMENT	CSS CELL	OPERATIONS CELL
SPT OPS SEC PERSONNEL	<ul style="list-style-type: none"> ● Compliance with corps orders and commander's intent. ● Synchronization of CSS with combat and CS. ● Support of regeneration of attrited units ● Impact of rear operations on logistics support of current and future operations. ● Positioning of COSCOM units in the corps rear area to effectively support operations. 	<ul style="list-style-type: none"> ● Synchronization of combat, CS, and logistics support of rear security operations. ● Reconstitution planning and control. ● Logistics support of rear security operations – of response forces and the TCF. ● Corps G3 terrain management issues.
ACofS G2 SEC PERSONNEL	<ul style="list-style-type: none"> ● Analysis of impact of situational information on COSCOM units. 	<ul style="list-style-type: none"> ● Current situational information for the corps rear area. ● Early warning of enemy activities in areas occupied by COSCOM units. ● IPB products for the corps rear area.
ACofS G3 SEC PERSONNEL	<ul style="list-style-type: none"> ● Tracking of incoming COSCOM augmentation elements/units. ● Identification of key COSCOM units and activities which require priority protection. 	<ul style="list-style-type: none"> ● Rear operations situation in areas occupied by COSCOM units. ● Identification of response forces from COSCOM units.
ACofS G4 SEC PERSONNEL	<ul style="list-style-type: none"> ● Movement priorities and rerouting of administrative movements to deconflict with tactical movements. ● MSRs and alternate MSRs. 	
ACofS G5 SEC PERSONNEL	<ul style="list-style-type: none"> ● CA and HN support of operations. ● CS status and civil affairs operations. 	
ACofS G6 SEC PERSONNEL		<ul style="list-style-type: none"> ● Signal and automation interface with HN and allies. ● Status of signal and automation capabilities to support operations.

Table 2-1. COSCOM staff interaction with corps main and rear CP cells. (Cont.)

INTERFACE WITH CORPS MAIN CP		
COSCOM ELEMENT	CSS CELL	OPERATIONS CELL
SPT OPS SEC PERSONNEL	<ul style="list-style-type: none"> ● Supportability and integration of logistics support for future operations. ● Adequate and timely logistics support of current operations. ● Status of major weapon systems. ● Status of critical supplies (fuel and munitions). ● Priorities for allocation and replacement of weapon systems. ● Priorities for maintenance support. ● Projection of logistics support capability 48 to 96 hours into the future. 	<ul style="list-style-type: none"> ● Synchronization of movements with maneuver operations. ● Support of close and deep operations. ● Regeneration (reconstitution) requirements.
ACofS G1 SEC PERSONNEL	<ul style="list-style-type: none"> ● Status of personnel strength in COSCOM units. 	
ACofS G2 SEC PERSONNEL	<ul style="list-style-type: none"> ● Assessment of impact of tactical situation and terrain analysis and weather on COSCOM units. 	<ul style="list-style-type: none"> ● Current and anticipated tactical situation. ● Priority information requirements of COSCOM units.* ● Monitoring of deep and current operations situational information.* <p style="margin-left: 20px;">* Also interface with main CP intelligence cell.</p>
ACofS G3 SEC PERSONNEL	<ul style="list-style-type: none"> ● Status of COSCOM units and the impact of current operations on future operations. ● Impact of tactical situation on forward employment of COSCOM elements. 	<ul style="list-style-type: none"> ● Warning orders and OPORDs. ● Status of friendly forces in AO. ● Current operations plans. ● Deception actions required by COSCOM units. ● Release of chemical weapons.

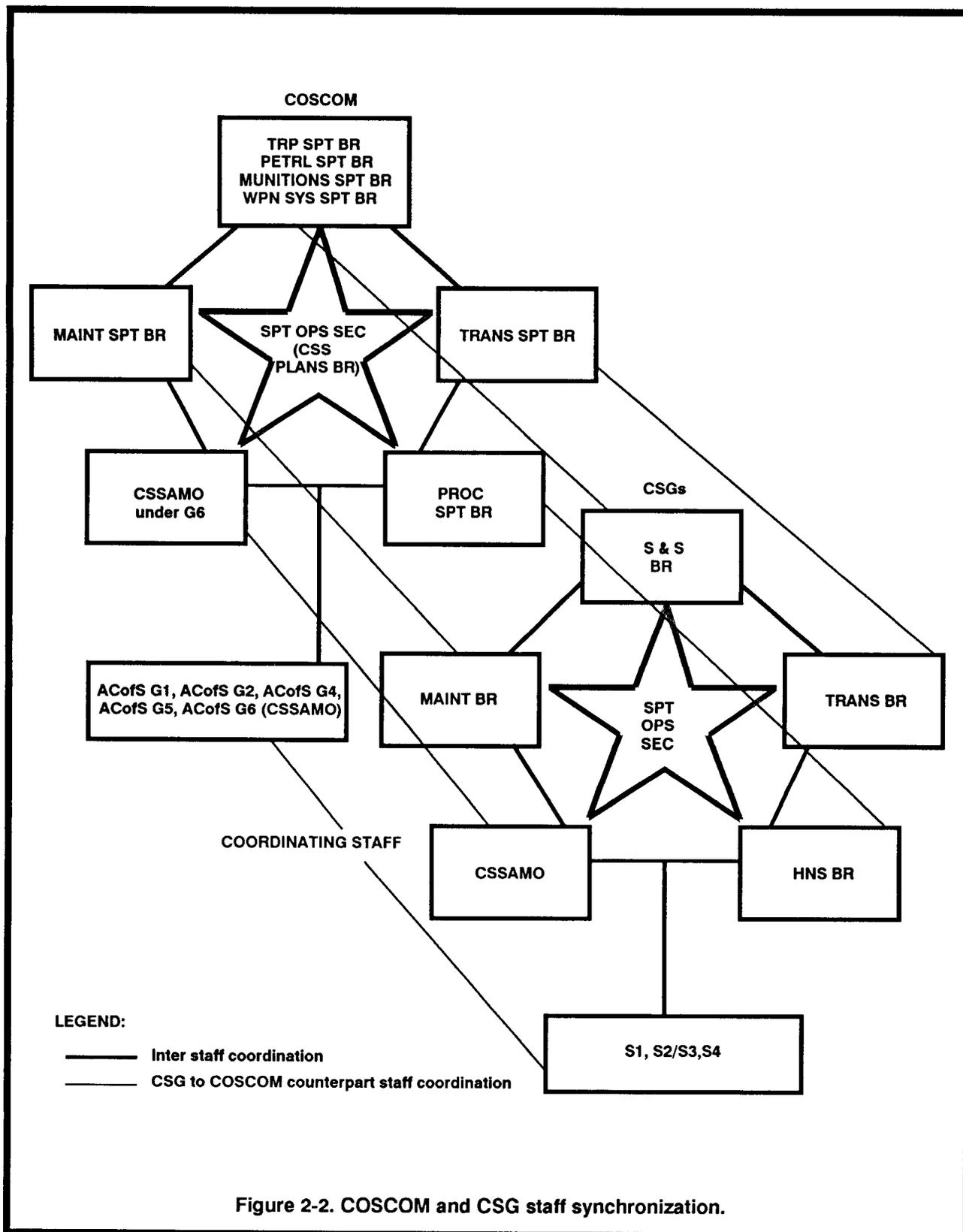


Figure 2-2. COSCOM and CSG staff synchronization.

the corps rear CP's operations cell for MP support. COSCOM units submit requirements for fire support through their supporting RAOC and S3/ACofS, G3 channels to the corps rear CP's operations cell. The operations cell coordinates with the corps FSCoord for on-order fires to assist units in bases and base clusters.

SUPPORT RELATIONSHIPS

The COSCOM support operations section serves as the central point of coordination on all matters pertaining to logistics and medical support for —

- Supported divisions, separate brigades, and ACRs.
- Supported units and major commands.
- Sister Service or ally.
- TAACOM, MEDCOM, TRANSCOM, and TA staffs.

Divisions, Separate Brigades, and ACRs

COSCOM units provide GS supplies, field services, and reinforcing DS maintenance support to divisions, separate brigades, and ACRs in accordance with corps plans, policies, and priority guidance. Planning requirements must be submitted to the COSCOM support operations officer. Problems with support are reported to the support operations section of the supporting CSB, CSG, and COSCOM.

To provide more responsive support to corps CS and CSS forces employing in support of the divisions, separate brigades, and ACRs, a CSB employs in the division area. This CSB provides area support to nondivision units in the division area. It provides reinforcing support to augment FSB/MSB capability to provide responsive support to corps forces, such as corps artillery, engineer, and ADA battalions, employing in the brigade or division area. The CSG LO at the FSB/DISCOM coordinates support requirements with FSB/DISCOM support operations staff and the S4 of the corps force to be supported.

Supported Units/Commands

S4s of units/commands requiring support coordinate initially with the support operations staff of the supporting CSB to secure initial support, to reestablish support, or to resolve problems with support. CSG support operations staff or medical brigade staffs provide the next higher point of contact for resolution of problems with support. COSCOM support operations staff officers resolve support problems requiring exceptional support efforts, such as coordinating

support for a surge, for out-of-sector support, or for corps forces attached to a sister Service or another corps. Where CSGs cross-level support among subordinate battalions to resolve support problems, COSCOMs cross-level support among subordinate CSGs.

Sister Service or Ally

When corps forces are ordered out of the Army AO to support a sister Service or ally, COSCOM support operations staff officers coordinate with CSGs in forming a task organized support element to accompany the corps force into the new AO or allied sector. The composition of the accompanying task organized support element will vary depending upon requirements and the degree of support to be provided by the sister Service or ally.

TAACOM, MEDCOM, TRANSCOM and TA

COSCOM support operations staff officers coordinate support requirements and support interfaces with TAACOM, MEDCOM, TRANSCOM, and TA staffs. Areas requiring extensive planning and coordination between COSCOM support operations staff and staffs at major commands at EAC include —

- Reconstitution.
- Replacement weapon systems.
- Medical evacuation and medical RTD.
- Throughput distribution.
- Trailer transfer point operations.
- Port clearance.
- Command controlled items.

LIAISON REQUIREMENTS

LNOs promote cooperation and coordination through personal contact between COSCOM and corps headquarters staff. They serve as the primary information gatherers for ACofS, G3 section and support operations section staff.

COSCOM LNOs

The COSCOM headquarters provides a LNO to the rear CP's operations cell and the CSS cell at both the corps rear CP and main CP. These LNOs are not an augmentation to the corps G3 or G4 staff. They are not TOE resourced. They are provided from available personnel resources.

COSCOM LNOs perform the following services —

- Coordinate with the corps signal officer in

maintaining communications between the corps and COSCOM headquarters.

- Attend daily briefings and provide input on COSCOM status and plans.
- Keep the corps informed of the COSCOM's logistics situation.
- Keep COSCOM headquarters staff informed of corps courses of action.
- Obtain information from the LNOs from corps troop organizations assigned to corps headquarters or represented in corps special staff divisions.

As necessary, LNOs are provided to Army force headquarters and allied headquarters. If reciprocal liaison is not possible, liaison needs to be established as follows:

- Higher unit provides liaison to lower echelon.
- Unit on the left provides liaison to the unit on the right.
- Supporting unit provides liaison to supported unit.

HN Liaison Officer

The COSCOM also provides a LNO to the HN support command. In turn, the HN support command may provide a LNO to the COSCOM's logistics operation center, CMMC, and CMCC. Headquarters company personnel arrange billeting, ration support, and other required services for these LNOs.

COMMAND POSTS

COMMAND POST ELEMENTS

The COSCOM FSOP establishes the COSCOM's CP organization and composition.

Main CP

The main CP consists of those elements of the command group, principal and special staff sections, and administrative support personnel required for C2, staff supervision and life support. It includes the LOC, special staff area, life support area, and perimeter defense area.

Headquarters elements set up on a hardened site and, when possible, in a town or village. Figure 2-3 depicts a sample configuration for a main CP set up in existing buildings. Layout conforms to the structure of available buildings. The CP configuration reflects broad functional relationships, continuity of operations, and information flow between sections. The availability of existing facilities and terrain determines actual location of elements and supporting staff sections. The ACofS, G3 plans the actual layout.

Logistics Operations Center

The LOC serves as the focal point for the entire spectrum of COSCOM support operations. Within a field environment, the LOC is a limited access facility within the main CP. It consists of the command group and principal staff from the support operations section. The LOC may obtain a degree of mobility and survivability by setting up key staff elements in 5-ton expansion vans.

Life Support Area

The life support area includes facilities for providing field feeding, billets, and organizational supply and

maintenance. The headquarters company commandant coordinates these support areas as well as other essential support services, such as shower, laundry, and latrines.

In the field environment, life support areas should be incorporated within base perimeter wire. Food service facilities need to be located a minimum of 50 meters from other facilities.

Alternate or Rear CP

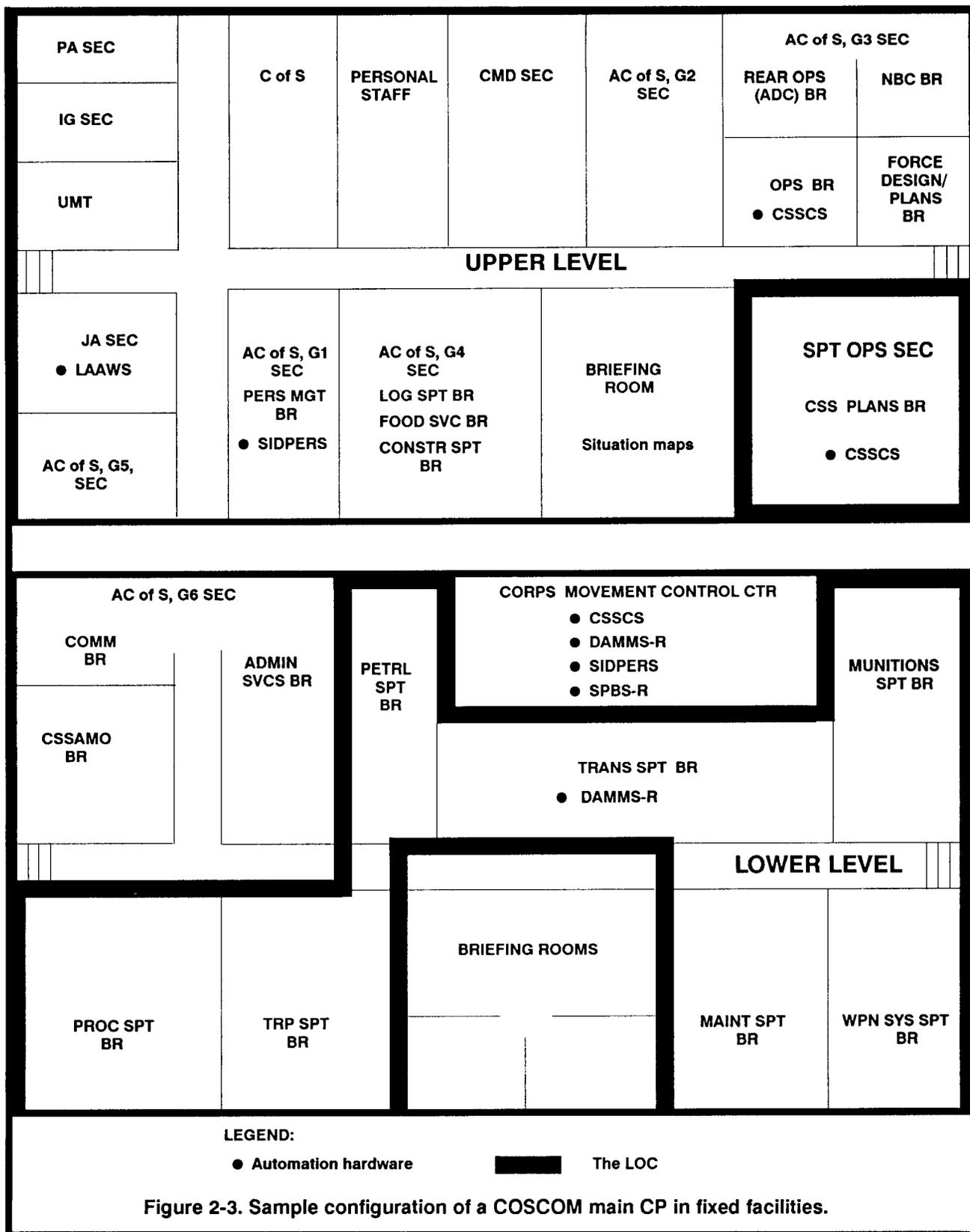
An alternate or rear CP provides continuity of C2 in the event of destruction or incapacity of the main CP. Primary and secondary alternate CPs can be selected from major subordinate commands. Selection depends upon the location of the subordinate CP and in-place communications. The rear CP may collocate with the rear CSG's main CP. Alternate CP staff consists of support operations section staff officers tasked to assist in reconstitution and to coordinate support of deep and rear operations from the rear CSG.

COMMAND POST DISPLACEMENT

The MARC code indicates that the COSCOM headquarters could move once every 8 to 17 days. The COSCOM headquarters displaces in the following phases or elements.

Advance or Quartering Party

The advance or quartering party, under control of the headquarters commandant, conducts the initial move to the new site. The quartering party conducts the initial security sweep. It maintains security while establishing the LOC and general location of the life support area. At least one NBC defense



monitoring team with equipment accompanies the quartering party.

Jump CP/Jump LOC

The jump CP or jump LOC consists of a nucleus of personnel and equipment which can displace on short notice. The headquarters commandant is responsible for coordinating transportation and logistics support. The jump CP may set up in the vicinity of a forward CSG or the corps rear CP jump element. It becomes operational in a minimum amount of time. The jump CP performs the following three primary functions:

- Reconnoiter the new main CP site and prepare detailed plans for relocating main CP elements.
- Secure the site until the main body arrives.
- Establish communications and maintain continuity of operations while the main CP is moving.

Jump LOC staff officers establish C2 of logistics distribution systems at the beginning of an operation. Support operations staff officers oversee the receipt of corps CSS units and supplies into the area. They may use a CSG's CSSCs and communications devices to interface with the COSCOM main CP and G4 staff in the CSS cell of the corps main and rear CP.

Main CP

The main CP is controlled by the COSCOM commander. It sets up near the CMMC and CMCC, preferably within available fixed facilities in a city, town, or industrial complex. The COSCOM ACofS, G3 selects several possible locations within the AO designated by the corps and in coordination with the supporting RAOC.

The headquarters commandant selects the exact site in coordination with the COSCOM C-E officer and corps headquarters commandant. The headquarters commandant is responsible for the movement and security of the LOC. He coordinates transportation support to ensure an orderly relocation of the main CP. The main CP requires more than one lift to move. Since the main CP locates in close proximity to the corps rear CP, he maintains continuous coordination with the corps headquarters commandant. A rear party remains to close out the location prior to joining the rest of the CP staff.

CP STAFF DEPLOYMENT

It is impracticable to deploy the entire COSCOM headquarters and its subordinate functional control centers in a body at the outset of an operation. A

portion of the COSCOM headquarters staff and special forces battalion remains to provide continuous C2 of the support force preparing to deploy. They also provide C2 of the force in transit and coordinate support to the deployed units. This CP element maintains an interface with NICPs and AMC and DLA item managers.

Primary staff officers provide C2 for the force establishing support operations in the objective area. Table 2-2 provides a sample COSCOM staff deployment schedule. Key personnel do not deploy on the same plane. The advance party sets up the jump CP in the objective area to coordinate support activities there.

Advance Party

The advance party precedes the first regular increment to establish working relationships with elements of corps headquarters, other Services, and HN officials. Normally, the COSCOM support operations officer accompanies the advance party to exercise control of logistics elements arriving in the area. Essential planning personnel from ACofS, G3 and support operations sections comprise the forward CP. Plans officers need to compare the tactical and logistics situation in the operations area with that in preconceived operations or contingency plans to determine required modifications to those plans.

METT-T dependent, advance party personnel review the –

- Condition and adequacy of facilities to receive and discharge ships and clear ports and stage onward movement.
- Requirements for engineer support.
- Locations and facilities for logistics and medical units.
- Negotiation for real estate, local procurement of supplies and services, and related support agreements with the HN.
- Extent of the threat within the operations area.
- Requirements for additional communications support due to terrain restrictions.

First Increment

If the operation occurs in a hostile country, the first logistics increment deploys to the operations area after combat forces have seized initial objectives and secured an operating base area. If the operation occurs in a nonactive combat situation, support operations staff officers and support elements precede combat elements to ensure

Table 2-2. Sample COSCOM headquarters staff deployment schedule.

COSCOM STAFF	ADVANCE PARTY	FIRST INCREMENT	REMAINING INCREMENTS
CG		P	
CofS/SGS	AC	N	F
Spt Ops Off	P/N	M	F
CSS Plans Br	P/N	M	F F
Troop Spt Br		P/N	F F
Munitions Spt Br		P/N	M F
Wpn Sys Spt Br		P/N	F
Petrl Spt Br		P/N	M
Maint Spt Br		P/N	M F
Trans Spt Br	P/CMCC	P/N	M F
Procure Spt Br		P/N	F
ACofS, G1		P/N	M F
ACofS, G2	P/N	M	F
ACofS, G3	P/N	M	F
ACofS, G4	P	N	F
ACofS, G5	P/N	M	F
ACofS, G6	P/N	M	F
Special Troops Bn		P/N	F
HQ Co	P/N	N	AR
Unit Ministry Team		P/N	
COSCOM Surgeon		P	
IG			P/N M F
SJA			P/N F
PAO			P F

Codes:

- AR- As required
- F- Follow-up elements
- M- Main body
- N- Nucleus staff
- P- Principal, usually a key individual
- AC- Alternate command of advance party

that required support is on hand and ready. The first increment may include the CMCC, CMMC teams, medical elements, and logistics elements attached to a CSB or special troops battalion. To arrange for the reception, processing, and support of logistics elements in the area, the first logistics increment —

- Arranges for communications and power.
- Selects sites for logistics facilities.
- Sets up field feeding, billeting, and shower areas.
- Evaluates the medical threat and determines required preventive medicine measures to counter the threat.
- Provides initial medical treatment and evacuation support.
- Arranges for unloading aircraft and ships.
- Establishes transportation and distribution networks.
- Establishes transportation movement control.
- Establishes a shipping control system with CONUS.
- Sets up a system for veterinary inspection and approval of local and HN food and ice sources.
- Establishes centralized receipt, storage, and inventory control of materiel.
- Sets up a system for receiving and processing containers.
- Provides potable water, if required. (Preventive medicine personnel approve the water source.)

Subordinate Control Centers

The COSCOM schedules the CMCC and required ATMCTs, MCTs, and MRTs for the earliest feasible arrival in the area. Airfield control personnel deploy first to control runway clearance. If the COSCOM supports other Services or nations, liaison personnel from the other Services and HNs augment the CMCC to coordinate their transportation requirements. The HNS coordination team identifies HNS that can reduce the types or numbers of US transportation forces required.

Due to its dependence upon the availability and adequacy of automation management systems and reliable communications and power, it may be impracticable to deploy the CMMC with the first increment. However, due to its criticality, CMMC teams or elements must deploy in the earliest phases of the operation. To establish early materiel management or stock control operations in the area, the COSCOM support operations officer must plan to

deploy mobile automation equipment and teams or elements from the CMMC. These CMMC teams or elements establish a limited capability to manage stocks and coordinate requisition procedures for each phase of the operation.

Successive Increments

The composition of COSCOM headquarters personnel in successive increments depends upon the personnel required to coordinate and supervise critical COSCOM support missions. Selected personnel need to remain at the home base to coordinate and control the preparation and deployment of follow-on logistics units.

Contingency Support Team

When the COSCOM supports a contingency operation, the corps can attach a contingency support team (TOE 63531 LA) to the COSCOM HHC. This team provides personnel and equipment to operate a centralized communications facility. Team personnel operate under the supervision of the COSCOM ACofS, G6's communications branch.

FUNCTIONAL COMMAND POST

FCP equipment provides a lightweight, mobile, rapid deployment and emplacement CP system. It standardizes CPs at each level. Containment by HMMWV or CUCV mounted shelters and vehicles allows for continuous operations during movements.

COMMAND POST SECURITY

CPs can employ a variety of survivability measures to improve survival of critical C2 nodes in a high-risk environment. If a hardened site is not available, CP dispersal should enhance survivability. The following measures can improve CP survivability:

- Duplication of CPs.
- Dispersion of elements within CPs.
- Deception.
- Frequent and rapid displacement.
- Hardened shelters.
- Size reduction.
- Signature reduction.
- Location out of enemy weapon range.
- CP design.

The headquarters commandant is responsible for coordinating internal security and local defense

of the main CP. CP security includes establishing -

- Prepared defensive positions.
- Explosive and nonexplosive barrier items outside the perimeter.
- Manned guard posts.
- Sentries and guards for local internal security.
- Alternate positions.
- Quick reaction force.

Each staff section is responsible for routine internal security. This includes use of -

- Signs and countersigns.
- Camouflage, noise, and light discipline.
- Defensive positions.
- Access roster or pass.

Unless the main CP is within the perimeter of a larger secure base, the headquarters commandant controls access to the main CP. Though within a base perimeter, the CP needs to be enclosed by concertina wire. ACofS, G3 section personnel prepare and issue access passes. Access control may be provided by MP augmentation.

The headquarters commandant assigns crew served weapons. He is responsible for employment of M42 alarm units. Since the location of chemical detector units depends on local wind direction, the NBC officer designates their locations.

The headquarters commandant is also responsible for establishing an airborne early warning network. He implements an area alerting system for air and ground attacks. He notifies the supporting RAOC of attack and requests quick reaction forces through the ACofS, G3.

LOC MAP BOARDS

Support Operations Situation Map

Support operations staff officers track and post support data on a logistics operations situation map. Personnel in

subordinate branches track or post the following locations:

- Troop support branch supply personnel track the location of subordinate DS supply units and supply points.
- Troop support branch field services personnel post the location of subordinate service units as well as the location of CEBs and mortuary affairs collection points.
- Troop support branch personnel also post the locations of medical units hospital and ambulance company locations.
- Munitions support branch personnel post the locations of CSAs, ASPs and nondivision ATPs.
- Petroleum support branch personnel post the locations of Class III points and bulk fuel distribution system facilities.
- Maintenance support branch personnel track the locations of subordinate maintenance units and MSTs attached to task force elements.
- Transportation support branch personnel post transportation unit locations, MSR, direction, and status; rail and rail nets, inland waterways and terminals; and airfields based on CMCC input.

To assist in posting the logistics status situation to the map, the COSCOM support operations officer designates an officer to maintain the grid coordinates for subordinate units as well as annotate the unit's readiness and status.

Tactical Operations Situation Map

ACofS, G3 operations personnel post the FLOT boundaries, and other control areas. They also post the location of enemy units and friendly combat units. NBC branch personnel post the NBC situation.

Corps Rear Area Situation Map

This map depicts the COSCOM base defense cluster, enemy activity within the corps rear area, and NBC data which affect COSCOM CP survivability.

COSCOM HEADQUARTERS AND HEADQUARTERS COMPANY

COSCOM HHC MISSION

The COSCOM HHC performs the normal C2 functions of a higher headquarters. Its mission is to -

- Command, control, and supervise all assigned and attached units.
- Plan for and direct the provision of logistics support (less COMSEC logistics) through its functional management centers and subordinate

commands to Army forces and other designated forces within the corps area.

- Plan for and direct the provision of specified logistics support of a contingency operation to the Army and other separate unified, specified or joint forces in a contingency area when directed and appropriately augmented by supplemental communication from TOE 63531LA00.

To perform its stated missions, COSCOM headquarters staff officers –

- Provide command, control, administration, and staff supervision for assigned and attached units.
- Develop detailed logistics plans and policies.
- Determine logistics support requirements.
- Recommend logistics support priorities and allocations to the corps rear CP's CSS cell.
- Prioritize and report COSCOM critical assets to the corps rear CP's operations cell.
- Develop and provide policies, guidance, priorities, and allocations to subordinate commands.
- Coordinate and exercise materiel management control through the CMMC.
- Coordinate movements within the corps area through the CMCC.
- Coordinate logistics requirements with the TAACOM, MEDCOM, TRANSCOM, TA, and NICPs, as appropriate.
- Pass requirements for backup logistics support to the TAMMC.

COSCOM HHC EMPLOYMENT

The COSCOM HHC and subordinate control centers normally locate in the corps rear area, within reasonable surface travel distance of the corps rear CP. Including its functional control centers, the COSCOM headquarters complex is the largest in the corps rear area. Inclusion of the CMMC and CMCC in the base cluster with the COSCOM HHC and corps rear CP makes it the largest CP structure in the corps rear area. As such, it is a prime threat target.

The COSCOM's ACofS, G3 staff officers perform a risk benefit analysis to analyze the risks associated with collocation of the corps rear CP with the COSCOM CP. They need to consider distances required to reduce vulnerability to destruction of adjacent CP elements versus defensibility associated with base clustering.

Headquarters elements disperse to enhance survivability. However, dispersion cover, and concealment

needs to be balanced against headquarters mission accomplishment and acceptable risks. To reduce risks, the COSCOM HHC may move once every 8 to 17 days. To do this, it needs to maintain 50 percent mobility.

COSCOM HHC ORGANIZATION

As shown by Figure 2-4, the COSCOM HHC consists of a command section, chief of staff section, support operations section, special troops battalion headquarters, and headquarters company. TOE 63412L000 serves as the requirements document for this organization. The MTOE is the allocation document.

Command Section

The command section provides C2 for the COSCOM staff and staffs in subordinate groups/brigades. Command section staff attends corps briefings on upcoming operations. They relate the corps commander's guidance/intent and provide mission analysis guidance to principal staff from the chief of staff section and support operations section relative to subordinate element capability versus support requirements.

Chief of Staff Section

The chief of staff's focus is on the COSCOM soldier, internal support to COSCOM units, and protecting COSCOM units. He supervises the activities of ACofS, G1-G6 coordinating general staff and special staff sections. He coordinates development of estimates, to include –

- Personnel estimate.
- Intelligence estimate.
- PSYOP estimate.
- Deception estimate.
- Operation estimate.
- Logistics estimate (internal logistics).
- Civil-military operations estimate.
- OPSEC estimate.

The chief of staff reviews recommendations from coordinating general staff and special staff. He assigns staff officers to prepare plans, orders, and reports. He ensures that special staff sections and ACofS, G1-G6 coordinating general staff implement the COSCOM commander's decisions and intent.

ACofS, G1-G6 coordinating general staff officers perform the common staff responsibilities discussed in FM 101-5. They develop policies and plans in their

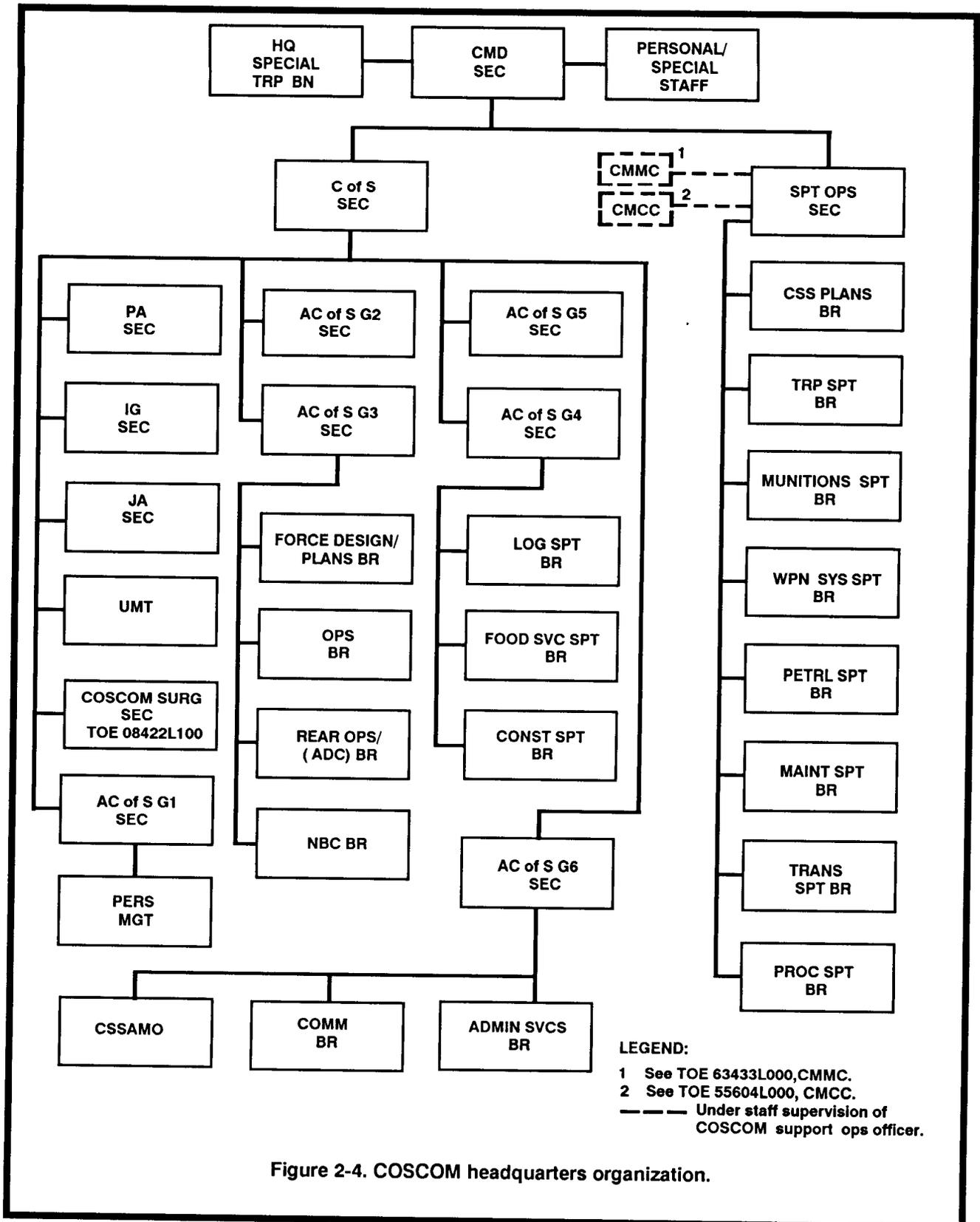


Figure 2-4. COSCOM headquarters organization.

respective technical areas and provide guidance, priorities, and allocations to subordinate commands. They also review the plans of counterpart staff in subordinate groups/brigades.

Special staff officers provide technical advice and planning assistance to the COSCOM commander and staff on internal COSCOM activities. Chapter 9 describes the mission and functions of both special staff sections and coordinating general staff sections in supporting those elements assigned, attached, or detailed to the COSCOM.

Support Operations Section

The COSCOM DCDR serves as the COSCOM support operations officer. As such, he focuses on the external mission support provided by the COSCOM. Using the CSS plans branch staff, he coordinates development of estimates and plans for external logistics support, to include —

- Support operations estimates.
- Annexes to the COSCOM OPLAN/OPORD.
- Support analyses.
- Corps service support plans/orders.

As the COSCOM support officer, the COSCOM DCDR has staff supervision over the CMMC and CMCC and the subordinate branches of the support operations section. Coordinating support operations staff officers interface with these COSCOM's control centers and subordinate groups/brigades to support Army forces and other designated forces operating within the corps area. In coordination with the centers, support operations staff officers —

- Compute overall requirements for the corps.
- Manage reserve stocks.
- Coordinate movements and throughput with the TAMCA.
- Develop and manage the maintenance plan.
- Cross-level resources.

COSCOM support operations staff officers exercise technical supervision over COSCOM external mission

support operations. As shown by Figure 2-5, subordinate branches of the support operations section reflect the COSCOM's mission to —

- Sustain the corps soldier - Troop Support Branch.
- Arm the corps force - Munitions Support Branch and Weapon Systems Support Branch.
- Fuel the corps force - Petroleum Support Branch.
- Fix the corps force - Maintenance Support Branch.
- Move the corps force - Transportation Support Branch.

Figure 2-5 lists the general mission areas of the branches under the COSCOM support operations section. Branch personnel develop estimates, plans, policies, and procedures for their areas of responsibility. They provide policy, guidance, and staff supervision to CMMC branches and technical staff assistance to applicable CSG branches. Chapters 4 through 8 and 10 provide specific detail and describe the involvement of support operations staff officers in the COSCOM's external support missions.

In addition, a procurement support branch, which encompasses staff previously assigned to the procurement branch of the CMMC, provides a central contracting element for the corps. It provides contracting support to corps headquarters, corps nondivision units, and corps troops. It also provides back-up contracting support to CSG contracting staff. If the full corps is not deployed, it may provide a contracting task force tailored for the specific contingency, emergency, or operation.

Special Troops Battalion Headquarters and Headquarters Company

The special troops battalion headquarters provides the C2 for all special troops assigned or attached to the COSCOM. The headquarters company provides C2 and supervision of enlisted personnel assigned to the COSCOM HHC. Both headquarters are covered in Chapter 9.

COSCOM HHC AUTOMATION SUPPORT

COSCOM staff officers require accurate and timely data to prepare accurate estimates and responsive plans and orders. Their recommendations to the COSCOM commander and corps staff relate directly to the timeliness and accuracy of the data provided.

Automation support systems aid staff officers in decision making. Interactive systems enable staff officers to collect, collate, analyze, formulate, and disseminate information.

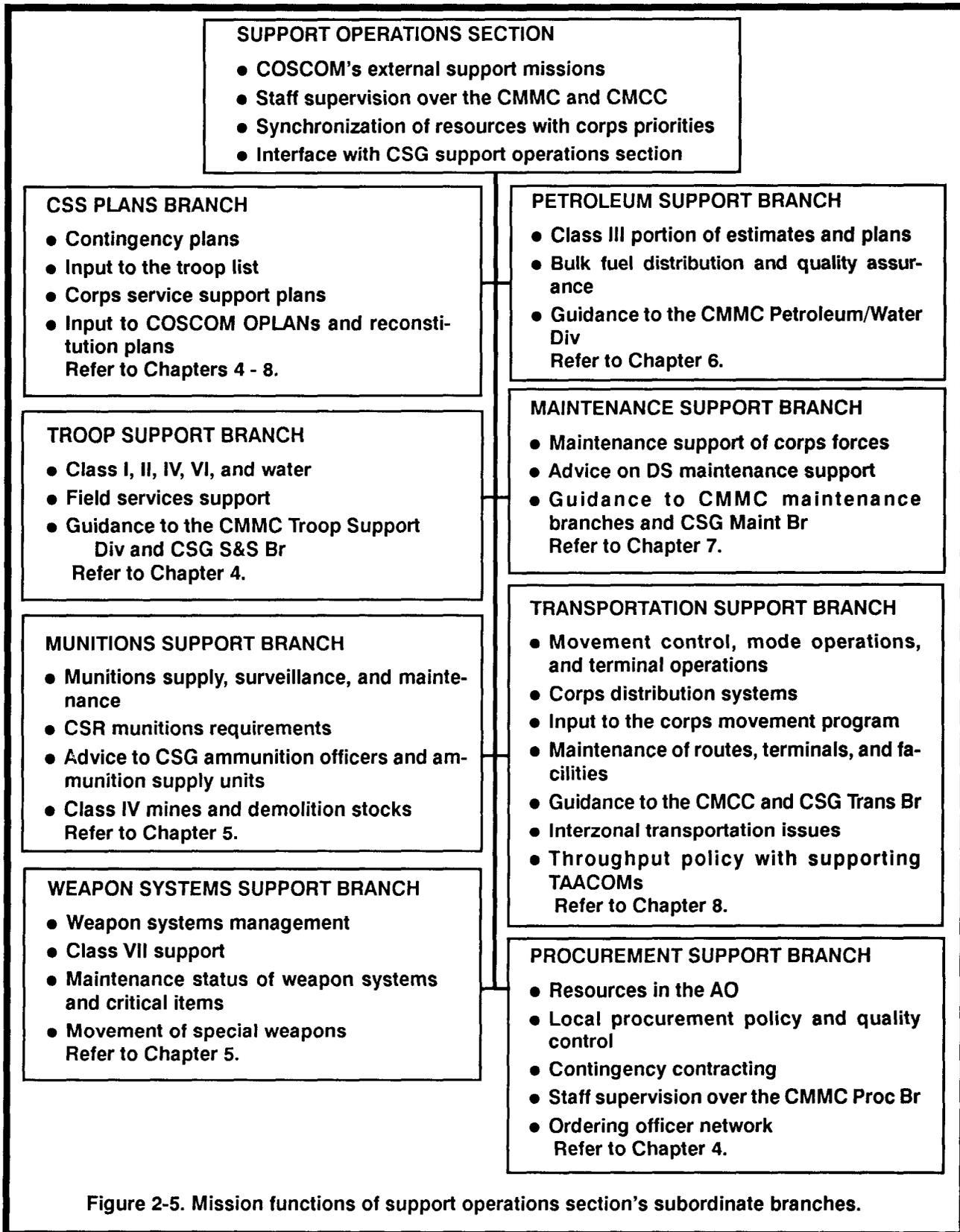


Figure 2-5. Mission functions of support operations section's subordinate branches.

ARMY TACTICAL COMMAND AND CONTROL SYSTEM

As shown by Figure 2-6, ATCCS links the following automated control systems through an interoperable family of common computers:

- Maneuver Control System. MCS provides automated assistance for the collection of battlefield information, coordination of plans, and dissemination of orders by commanders and staffs at corps, division, brigade, and maneuver battalion levels.
- Advanced Field Artillery Tactical Data System. AFATDS automates fire support planning. This includes target analysis and coordination and control of all fire support assets.
- Forward Area Air Defense Command, Control, and Intelligence. FAAD C2I passes aircraft tracking data to air defense units and cues weapons to approaching aircraft.
- All-Source Analysis System. ASAS automates the processing and dissemination of battlefield intelligence.
- Combat Service Support Control System. CSSCS provides critical CSS information for theater and force level commanders. CSSCS supports both tactical and logistics decision makers by providing logistics, medical, financial, and personnel command and control information.

Critical information on the five battlefield functional areas flows between the nodes to update the data base of each automated control system. ATCCS computers hook up to MSE communications equipment. This allows information to flow between the automated control systems over the MSE area communications network, SINGARS combat net radios, and data distribution systems.

COSCOM HHC AUTOMATION INTERFACE

COSCOM commanders and staffs obtain C2 information through a network of battlefield automated systems. Table 2-3 lists STAMIS to be run by COSCOM HHC elements and their interface with other elements. The current automation transition plan calls for the COSCOM HHC to be authorized common hardware and software to receive and process –

- CSSCS.
- SIDPERS.

- TAMMIS.
- DAMMS-R
- SPBS-R.
- ULLS.

Staff officers assigned to the support operations section's subordinate branches use keyboard and video display units to process and transfer data between the branches.

CSSAMO personnel use their TACCS and ULC devices to review STAMIS software and change packages to help resolve problem areas encountered by subordinate CSSAMOs.

CSS AUTOMATION MANAGEMENT OFFICE

COSCOM headquarters no longer depends upon a separate data processing unit. The CSSAMO, authorized the COSCOM ACofS, G6 section and each CSG, provides software support to COSCOM units using logistics STAMIS. The COSCOM CSSAMO serves as the system integrator for logistics STAMIS system support in the corps. It coordinates the actions of the CSSAMOs in subordinate CSGs and the DISCOM's CSSAMO. Mission tasks are listed in the ACofS, G6 section of Chapter 9.

COMBAT SERVICE SUPPORT CONTROL SYSTEM

CSSCS provides timely and reliable integrated logistics, medical, financial, and personnel information to the corps commander and subordinate logistics staff. Though variable, CSSCS interface reduces the time to obtain information from previous 12 to 24 hours to less than 3 hours.

CSSCS Interfaces

CSSCS provides COSCOM personnel access to summary data provided through the objective interface between CSSCS, ATCCS control systems, and the logistics STAMISs shown on Figure 2-7. This interface provides COSCOM support operations staff officers the necessary CSS C2 information required to assess logistics supportability of operations.

CCSSCS provides the automation interface between COSCOM HHC elements and subordinate commands, the corps G4, supported DISCOMs, separate brigades, and ACRs. Figure 2-8 depicts the CSSCS interface with ATCCS automated control systems and objective CSS STAMISs at each echelon.

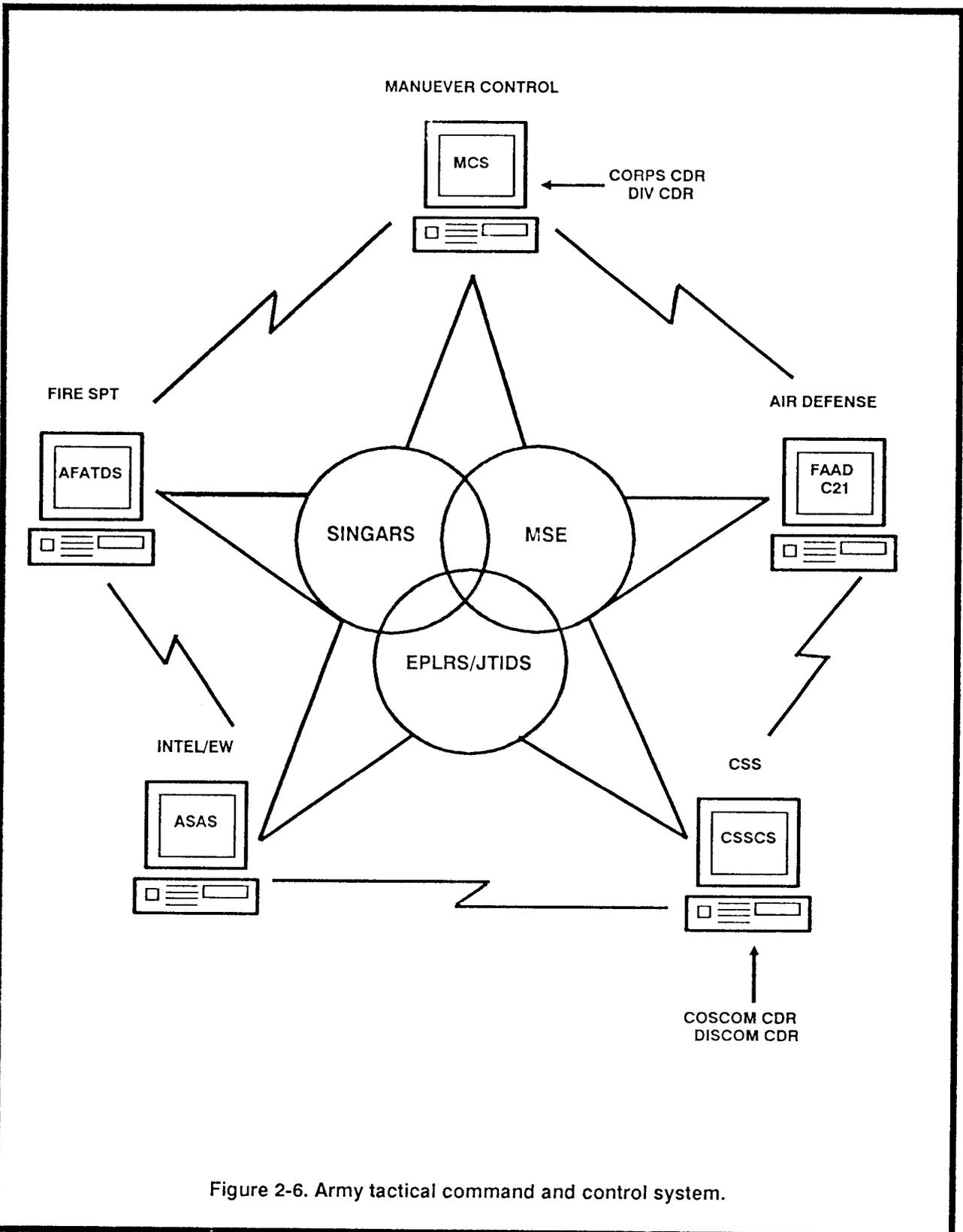


Figure 2-6. Army tactical command and control system.

Table 2-3. COSCOM HHC STAMIS and interfaces.		
COSCOM HHC ELEMENT	STAMIS	INTERFACES WITH:
ACofS, G1 Section Personnel Mgt Branch	SIDPERS	Corps G1 Corps Personnel Group Replacement Company CMMC CMCC HQ, Special Troops S1 HQ Company Corps Support Group S1 Medical Bde/Group S1
ACofS, G3 Sec	CSSCS	COSCOM Support Ops Sec COSCOM Units
Support Ops Sec CSS Plans Branch	CSSCS	Corps G4 CMMC CMCC CSGs' Support Ops Sec Medical Bde/Group TAMMIS DISCOMs Sep Bde Spt Bn ACR Spt Squadron
Maintenance Spt Br	CSSCS/SAMS-2	CMMC
Transportation Spt Br	CSSCS/SAMS-2	CMCC
Special Troops Bn	SIDPERS SPBS-4 ULLS-4	COSCOM ACofS, G1 COSCOM ACofS, G4
HQ Company	ULLS-PLL	

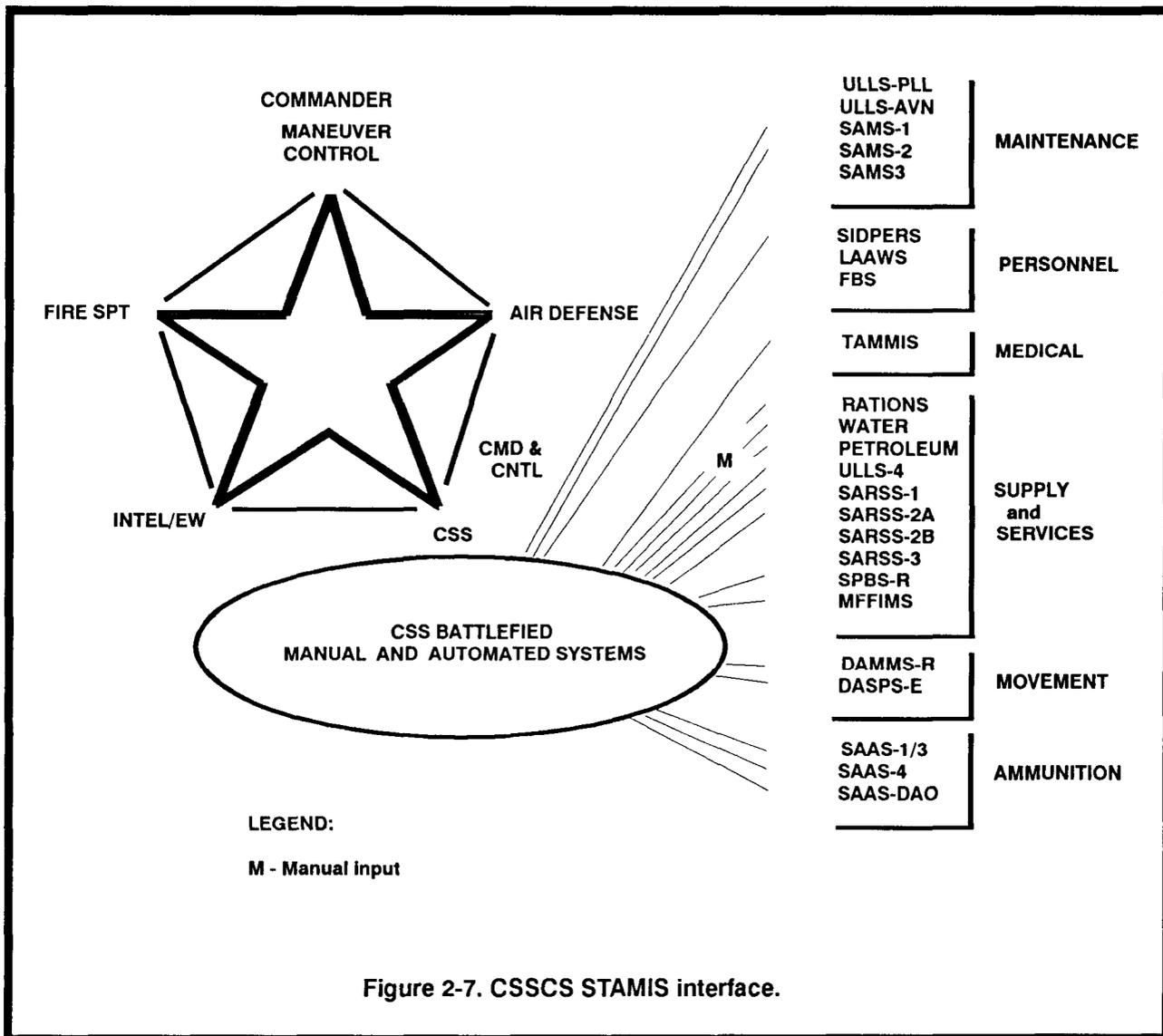


Figure 2-7. CSSCS STAMIS interface.

CSSCS Data Base

CSSCS maintains a data base of planning and consumption factors used in logistics planning and forecasting. In addition to unclassified factors from sources such as FM 101-10-1/2, the CSSCS data base maintains —

- Force commander's critical CSS data requirements.
- CSS commander's critical CSS data requirements.
- CSS coordinating staff CSS data requirements.
- Summary CSS data on organizations two levels below the force level supported.
- Summary CSS data on maneuver brigades.

CSSCS transmits logistics estimates, supply status, petroleum status, ammunition status, resupply rates, and equipment requirements. COSCOM support operations staff officers use CSSCS to —

- Project resource requirements.
- Monitor critical assets.
- Assess shortfalls in supply, maintenance, transportation, and medical resources.
- Analyze supportability of tactical plans.
- Determine the supportability of alternate courses of action.
- Plan logistics support operations, to include support of reconstitution operations.

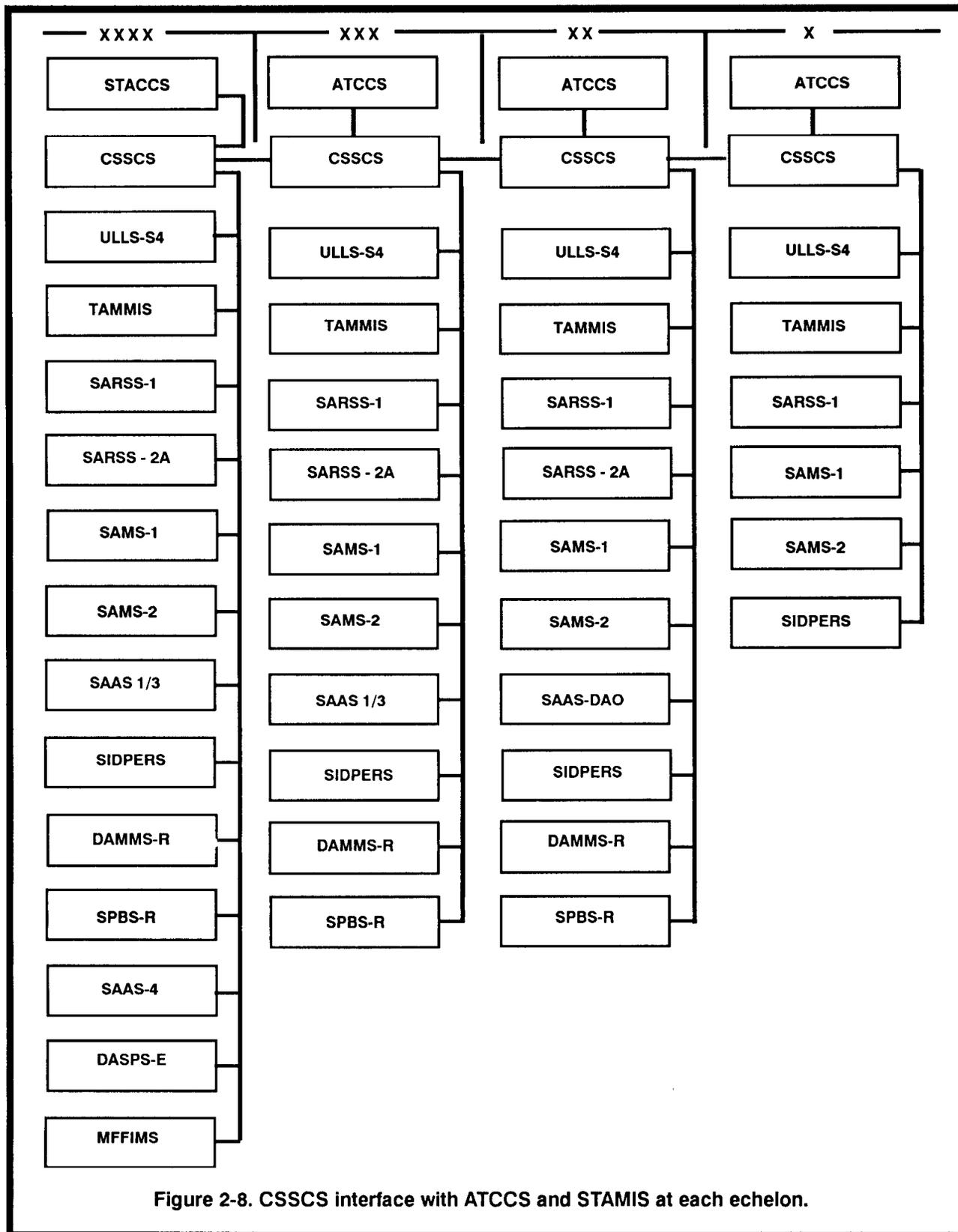


Figure 2-8. CSSCS interface with ATCCS and STAMIS at each echelon.

- Plan logistics support of contingencies and future operations.
- Respond to emergency or special requirements, such as support of a reaction task force, support of a corps surge, or assistance with retrograde operations.
- Assess logistics support risks involved when considering support options.
- Determine support priorities.
- Cross level resources through greater visibility of assets.
- Synchronize logistics to support tactical plans.
- Control critical assets.

Decision-Making Support

CSSCS supports staff officer decision making and course of action analysis. It processes selected logistics, medical, and financial critical resource data into a form such as Figure 2-9 used by COSCOM support operations staff officers for locally developed planning and forecasting factors. CSSCS report screens such as Figure 2-9 alert COSCOM support operations staff officers to critical red and amber areas.

CSSCS also supports decision making through its message formats. The computer can generate and transmit orders previously written or given verbally.

Course of Action Evaluation

CSSCS provides a course of action logistics planning capability to help staff officers evaluate the supportability of proposed courses of action. Algorithmic functions enable COSCOM and subordinate CSG and medical brigade commanders and staff to analyze multiple courses of action for logistics supportability.

CSSCS allows COSCOM staff officers to assess the courses of action in light of external factors, to include —

- Area of operations (terrain, roads, and weather).
- Enemy capabilities directed against logistics activities.
- Civil military situations (refugees and damage to the area).

CSSCS allows staff officers to evaluate each course of action by displaying the requirement and projected availability for each resource. It calculates Class III, IV, V, VII, and IX requirements for each course of action. Based on projected availability of resources, CSSCS projects the force status during course of ac-

tion execution. CSSCS helps support operations staff officers determine current and projected capabilities for a specific force. It correlates support capabilities with various battle intensities and scenarios.

For example, CSSCS can project the ability of transportation assets and capacity of supply routes to deliver required resources to destinations in support of each course of action. Based on battle losses, maintenance work loads, maintenance returns, and supply actions, CSSCS can also project weapon systems status during each course of action execution.

STANDARD INSTALLATION PERSONNEL SYSTEMS

COSCOM ACofS, G1 section personnel use SIDPERS software programs to coordinate personnel management functions with the personnel group assigned to corps headquarters. They use SIDPERS to transmit replacement requirements, combat loss data, and personnel management data for the COSCOM. Subordinate group/brigade S1s transmit information summary copies of personnel status reports to the ACofS, G1 section via SIDPERS. Facsimile machines, a UGC-144, and additional DNVTS with TACCS help to offset the requirement for large volume, hard copy message traffic and personnel management data flow between subordinate organization S1s and corps personnel elements.

Headquarters, special troops battalion personnel use SIDPERS software programs to transmit strength accounting data and by-name personnel accounting information for the COSCOM HHC and any attached units via a TACCS device to the supporting personnel support unit.

THEATER ARMY MEDICAL MANAGEMENT INFORMATION SYSTEM

COSCOM and nondivision HSS staff officers use TAMMIS to obtain timely, accurate, and relevant HSS data. The COSCOM surgeon and ACofS, G1 staff officers use TAMMIS to monitor evacuation, treatment, and tracking of patients from the divisions throughout the corps rear area.

DEPARTMENT OF THE ARMY MOVEMENTS MANAGEMENT SYSTEM-REDESIGN

COSCOM transportation support branch personnel use DAMMS-R to plan and project transport capability and to monitor transportation distribution network status. They use DAMMS-R software to review movement

UNCLASSIFIED
CSSCS Capability Report

TIME	CBT POS	CBT INTENSITY	OVERALL STATUS	RESOURCE CRITICALITY							
				PERS	AMMO	FUEL	TRANS	MAINT	MED	OTHER SUP	SVCS
				20	10	10	10	10	10	10	5
LAST 24 HRS		L	G	G	G	G	G	G	G	G	G
CURRENT 24 HRS		H	G	G	A	A	G	G	G	G	G
NEXT 24 HRS		M	A	A	R	A	A	G	G	G	G
24-48 HRS		H	A	A	A	A	R	G	G	G	G
48-72 HRS		L	A	A	A	A	A	G	G	G	G
72-96 HRS		M	A	A	A	A	A	G	G	G	G
REMARKS:	G= Green A= Amber R= Red L= Low M= Medium H= High										

UNCLASSIFIED

Figure 2-9. Sample CSS capability report.

commitments. DAMMS-R data helps them analyze transportation requirements, movement status, mode capabilities, and transportation network resources. They can then take action to expedite delivery of critical supplies. Transportation support branch personnel use DAMMS-R status data when coordinating with -

- Corps G4 transportation staff officers in forecasting movement requirements, identifying and resolving asset shortfalls, and programming movements of logistics stocks.
- CMCC staff to resolve conflicts with allied forces and civilian agencies regarding use and regulation of ground LOCs.
- CMMC and CMCC staff and other COSCOM support operations staff in tracing and diverting critical cargo intransit.

STANDARD PROPERTY BOOK SYSTEM-REDESIGNED

SPBS-R software programs provide property book accounting for Class VII and nonexpendable Class II and IV items. They enable the special troops battalion property book officer to keep the COSCOM commander and ACoF, G3 personnel informed of the unit status of the COSCOM HHC.

UNIT-LEVEL LOGISTICS SYSTEM

Headquarters company personnel use ULLS software to maintain the PLL for the COSCOM HHC. They also use ULLS to transmit materiel readiness data, unit equipment status data, and maintenance requirements on the headquarters' ULC device.

AUTOMATION INFORMATION SECURITY

COSCOM ACoF, G6 section personnel develop a security plan (to include physical access controls and

COSCOM HHC COMMUNICATIONS SUPPORT

Logistics support is communications dependent. To enable COSCOM headquarters staff officers to exercise C2 and coordinate support issues with staff counterparts, the COSCOM HHC must possess reliable communications. It must maintain access to the MSE communications network. Theater dependent, it may also need to interface with the theater army area communications system.

MSE AREA COMMUNICATIONS SYSTEM

MSE ensures near real-time communications between COSCOM headquarters, corps headquarters, and the headquarters of subordinate groups/brigades. MSE provides secure area communications to static customers

database access administrative controls) to ensure security when processing classified and unclassified-sensitive information. They develop a contingency plan so that if data are modified or destroyed unexpectedly, recovery procedures are available. They perform a risk analysis to include an analysis of data criticality, the sensitivity levels of data processed, local criminal and intelligence threat, and the vulnerability of automation.

Software controls protect against compromise, subversion or unauthorized manipulation. Appropriate safeguards need to be implemented to detect and minimize inadvertent or malicious modification or destruction of data from malicious software or software virus. To minimize the impact of unauthorized changes, a backup or master copy of the software needs to be maintained and safeguarded.

Hardware security controls include preventing unauthorized access. CTASC-II systems at the CMMC and CMCC must be included in the physical security plan. CSSAMO personnel need to observe contract maintenance personnel performing maintenance operations.

CONTINUITY OF OPERATIONS

Computer hardware electronic components can be affected by high altitude electromagnetic pulses and NBC contamination. For COOP, each site needs to consolidate and save information at the completion of each day's processing. Operators should move selected system files to a removable disk cartridge, then store cartridges away from the site.

If a site becomes inoperative, another site can run mission essential support data. Software systems can be run on a TACCS at the parent unit. Requisitions may be passed to the next supply echelon.

authorized subscriber terminals located in or near CPs. It uses a fixed directory and possesses a flood search ability. Customer phone numbers do not change as customers move about the battlefield. Once a customer's 7-digit phone number has been dialed, MSE completes the call as long as the customer remains connected to a switchboard or in a vehicle equipped with a MSRT.

Area Coverage

MSE provides common user support throughout a geographic area as opposed to dedicated support to a specific unit or customer. The MSE network extends

from the corps rear area forward to the supported divisions. The typical MSE corps system provides communications support for a five division corps occupying an area of about 15,000 square miles (37,500 square kilometers). The corps signal brigade controls the entire nodal system and the switchboards located in the corps area. See FM 11-30 for coverage of combat communications within the corps area.

Wire Subscriber Access

Wire subscriber access points provide the entry points or interface between fixed subscriber terminal equipment owned and operated by users and the MSE area system operated by signal units.

Nonsecure Telephones

DNVTs provide nonsecure voice access to wire subscribers, usually at CP locations. DNVTs tie into the MSE area system via field wire. They interface with facsimiles for informal record traffic. They interface with single subscriber terminals for formal worldwide record traffic. DNVTs also interface with TACCS and ULC, for processing STAMIS software systems, and with ATCCS for entry into CSSCS. Check the latest TOE/MTOE for DNVT authorization.

Mobile Radiotelephones

MSRTs provide a mobile radiotelephone capability for secure command net communication on-the-move. MSRTs consist of a high frequency radio and a digital secure phone mounted on a vehicle. MSRTs can also be used in CPs to allow access to staff and personnel. For example the MSRT allows the COSCOMDCDR contact with subordinate units and EAC units beyond FM range while in his vehicle. The ACofS, G4 can use a MSRT to manage ADC operations and allocate facilities throughout the COSCOM. Refer to the latest TOE/MTOE for MSRT authorization.

MSRTs interface with the MSE system through a radio access unit. As long as the radio unit maintains line-of-sight contact with the RAU, it connects into the area system. The operational planning range extends to 15 kilometers from any RAU.

User Responsibility

User personnel install DNVTs and MSRTs and lay field wire to MSE interface points. The amount of wire the COSCOM HHC needs depends on the dispersion requirements of subordinate headquarters. FSOPs cover internal wire installation and connectivity to MSE interface points. They need to specify who does the installation and connection and in what priority.

Retention of Current Wire Net Equipment

Current organic two-wire switchboards and telephones cannot enter the four-wire digital MSE system. Each COSCOM HHC retains the current two-wire switchboard and associated telephones for local security and internal operations. Retaining this internal backup system reduces message volume sent over the MSE net.

HN INTERFACE

HN commercial telephone service can supplement tactical communications systems. To reduce the burden on tactical communication systems, COSCOM units use this commercial phone system when available and practical.

Where HNS agreements exist, the COSCOM command net and CMMC net interface with supporting HN organizations. STANAG 5040 describes a NATO analog interface with MSE. Communications between the HN and COSCOM CP occur via fixed and field type communications links. To ensure interoperability with HN supporting units, US cellular logistics teams need communications and automation equipment which allows them to interface with the communications network of supporting HN organizations. Existing HN phone lines enable communications with US liaison teams.

STANAG 4214 covers digital interoperability with NATO units. STANAG 5000 covers facsimile AN/UXC-7 interoperability capabilities.

RADIO NETS

ACofS, G6 communications branch personnel analyze net requirements.

AM Net

ACofS, G3 section personnel establish and operate an AM radio command operations net to coordinate logistics supportability issues with corps headquarters and subordinate commands. The net consists of a long-range AN/GRC 193 radio authorized the ACofS, G3 section. This radio is capable of transmitting information over distances up to 80 kilometer/50 miles. The AM command net enables COSCOM staff to discuss critical support issues with -

- Corps G3 and G4 staff.
- Corps rear CP CSS and operations cells.
- Corps main CP CSS and operations staffs.
- COSCOM forward/jump CP.

The AM command net allows C2 to the COSCOM

from the corps headquarters and enables COSCOM staff to obtain real time information on changing corps operations and support priorities. It also enables the COSCOM to maintain C2 when operating a forward/jump CP beyond FM range of their main CP.

The COSCOM AM command net enables COSCOM command section staff and support operations staff officers to disseminate mission taskings and transmit critical requirements data with -

- Corps headquarters.

- Subordinate commands.
- Control centers.
- DISCOMs and DMMCs.
- Separate brigade support battalions and BMMCs.

FM Net

The FM net shown by Table 2-4 enables COSCOM headquarters and subordinate functional centers and commands to react quickly to changes in operational plans and support requirements and to direct/redirect subordinate units. It provides a means to transmit daily

Table 2-4. COSCOM FM command net/rear operations net.

COSCOM HHC ELEMENT	FM RADIO	RATIONALE
Command Section	AN/VRC-92 - CDR AN/VRC-92 - DCDR	C2 of COSCOM Monitor corps C2 FM Net Talk in COSCOM Cmd FM Net Talk in corps C2 FM Net
Chief of Staff Sec	AN/VRC-90	
ACofS, G3 Sec Ops Br	AN/VRC-92 AN/VRC-90	Report time sensitive information Use corps Ops/Intel Net
ACofS, G6 Officer Sec	AN/VRC-90 2 AN/VRC-92	Talk in COSCOM Cmd FM Net Transmit to forward and main FM nets
Support Ops Officer	AN/VRC-90	Communicate with major supported commands Affect supply responsiveness to critical customers
Special Troops Bn	AN/VRC-90	C2 of special troops elements
HQ Company	AN/VRC-90	Perimeter defense

support data and supports inter-staff coordination. The FM net allows support operations staff officers to confer with staff counterparts in subordinate groups and battalions.

COSCOM support operations staff officers use the FM net to redirect support efforts of subordinate commands. This in turn enables the corps commander to follow through when his division commanders take advantage of windows of opportunity.

The FM command net also allows support operations staff to transmit critical or sensitive information on the status of degraded units. Degraded unit status information and regeneration requirements pass from the assessment element of the RTF or battle damage assessment teams through the command net to COSCOM support operations staff.

Rear Operations Net

Organic short-range FM radios are also authorized to facilitate transmitting rear operations data. They allow the COSCOM headquarters to provide data to the corps rear CP's operations cell relative to sustainment of rear operations or logistics support required by a TCF. The rear operations net provides links to -

- Corps rear CP operations cell.
- Base cluster operations center.
- Other base/base cluster elements (CMMC and CMCC).
- Sector RAOC.
- MP security company.
- Rear corps support group (alternate COSCOM CP).

The special troops battalion commander and headquarters company commandant use their FM radio for base security and to communicate with other base elements. The net allows base/base cluster elements to report incidents to and request support from the area RAOC.

CONTINGENCY SATELLITE COMMUNICATIONS

To provide supplementary communications support, the corps can allocate a contingency support team (TOE 63531LA) to those COSCOM headquarters with a contingency operations mission. The team owns four TACSATCOM radio sets (AN/PSC-3). These battery operated backpack radio sets provide satellite/line-of-sight communications in the 225-to 400-MHz frequency range. They provide digital burst or emergency voice communications over a satellite channel. The radio sets

operate in both halt and on the move modes.

Though TACSATCOM radios enable more responsive support from CONUS NICPs, C-E officers need to consider the following use limitations:

- Limited availability of satellites.
- Satellite and network controls.
- Possible long lead time for satellite access.
- Preemption by higher priority users.
- Frequency constraints for satellite communications.
- Local restrictions, such as terrestrial links which should be honored.
- Need for guard bands to avoid interference.
- Affect of weather on satellite communication.
- Interference with other links.
- Limited EW survivability.

COSCOM C-E OFFICER

The ACofS, G6 serves as the COSCOM C-E officer. He formulates C-E plans, policies, and procedures and integrates those plans through coordinating directly with -

- COSCOM staff officers.
- Corps C-E officer.
- Communications operations chiefs of subordinate and attached units.
- Signal brigade staff officers, for detailed COSCOM communications requirements.
- Supporting area signal officers on local communications matters which pertain to COSCOM units.
- Military intelligence brigade staff officers.

Communications Support Planning

When preparing for projected operations, the C-E officer revises C-E estimates, plans, and orders. He performs the following tasks during the preparation of the C-E annex to the COSCOM OPLAN/OPORD -

- Analyzes the C-E requirements of the COSCOM HHC and COSCOM units for projected operations.
- Determines the extent of C-E support required.
- Determines the sources and availability of C-E assets.
- Coordinates with the CA planning officer to obtain estimates of HN C-E resources and their availability.

- Coordinates communications requirements with the signal brigade.
- Develops plans to provide the COSCOM HHC with continuous communications from the time of alert through establishment of operations in the AO.
- Determines requirements for critical items of communications equipment to be stockpiled.
- Coordinates requirements with the corps C-E officer.
- Provides information about current and future locations of subordinate unit CPs to the assistant corps signal officer in the signal control center.

The COSCOM C-E officer develops a contingency plan for redundant communication in the event of catastrophic failure of the MSE network, or inability of the COSCOM CP to interface with the MSE system. Destruction of the servicing node prevents the COSCOM CP from using the MSE network through that node. MSRTs provide limited redundancy to access the MSE system through the radio access unit network, but that capability is limited.

FMs 24-22 and 101-5 provide details on signal planning and prescribe the format and content of signal orders and instructions. FM 24-18 describes tactical single-channel radio communications techniques.

Staff Supervision

The COSCOM C-E officer exercises technical supervision over the communications elements assigned or attached to the COSCOM. To discharge this responsibility, he analyzes the -

- Internal communications system for the COSCOM HHC.
- Internal communications system for the COSCOMs functional control centers, groups, and brigades.
- Communications links and requirements between the COSCOM HHC, subordinate COSCOM elements, supported units, and the supporting

area signal centers in the area communications system.

- Communications capability organic to COSCOM units and the linking of these capabilities into a workable COSCOM communications system.

TELECOMMUNICATIONS CENTER

The telecommunications center integrates the message processing functions of the communications center and message center. Center personnel receive, edit for format, and transmit or distribute record correspondence in message form for all elements of the headquarters. The center selects the means of message transmission based on precedence, traffic volume, backlog, and means available.

COMMUNICATIONS SECURITY

Sophisticated communications equipment and EW protection devices are worthless if personnel responsible for handling, storing, using, or having knowledge of classified COMSEC information fail to take measures to deny unauthorized persons information of value. Supervisors, hand-receipt holders, communications center personnel, and all personnel engaged in preparing and transmitting messages need to know and comply with COMSEC measures. AR 380-19 describes these measures. They include employing -

- Cryptographic security through using cryptosystems.
- Emission security to prevent unauthorized intercept and analysis of compromising emanations from COMSEC equipment and telecommunications systems.
- Transmission security to protect transmissions from interception and exploitation.
- Physical security to safeguard classified equipment, materiel, and documents from access or observation by unauthorized personnel.