CHAPTER 3

CS and CSS Communications

3-1.   Introduction

a.   Winning on the AirLand Battlefield requires synchronizing support from all levels. Corps CS and CSS units must be able to communicate with the theater. The tie-in between the theater communications system and the MSE system occurs as a result of the various interfaces specified in Appendix F.

b.   MSE is only one part of the communications equation for CSS. All available communications means are needed to support the battlefield functional area requirements implied in Figure 3-1. Every leader should read FM 100-10 which reflects current battlefield support doctrine and FM 101-5 which reflects C^2 for commanders and staff. This chapter discusses the battlefield support communications and offers solutions for some of the challenges that face signal leaders.

3-2.   Using the Area System

a.   MSE is the primary secure/nonsecure communications system used by CS and CSS units. CS and CSS units deploy throughout the corps' and divisions' areas to provide the best possible support to combat units. Distances between support elements and their headquarters often exceed the range of organic single-channel radios.

b.   The LENs and SENs (Figure 3-2) provide area communications system wire access to the COSCOM, DISCOM, CS and CSS brigades, separate groups, and separate battalions on a habitual basis. RAUs provide commanders and staff officers (who are authorized MSRTs) with mobile access to the MSE ACUS. NCs located near the corps rear boundary (Figure 3-3) interface with the EAC area telephone system. EAC area common-user communications interface is not restricted to these NCs; TACSAT allows EAC communications interface to take place anywhere it is needed on the battlefield. EAC interface also provides access to the other branches of service of the Department of Defense. The assets to affect this interface follow the rule of higher-to-lower, left-to-right, and supporting-to-supported.
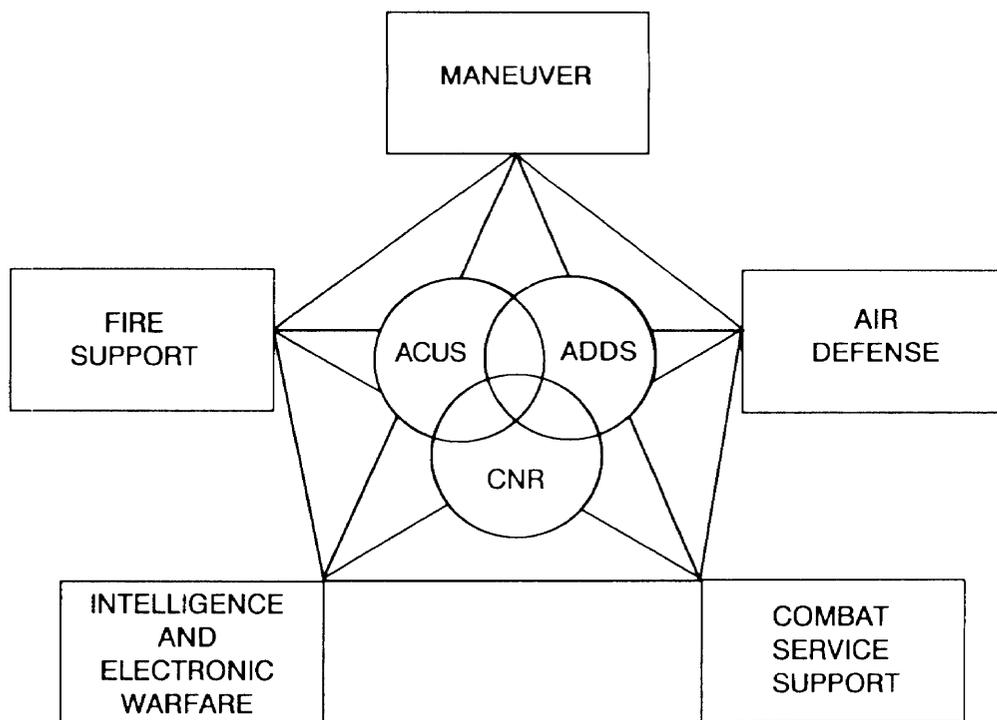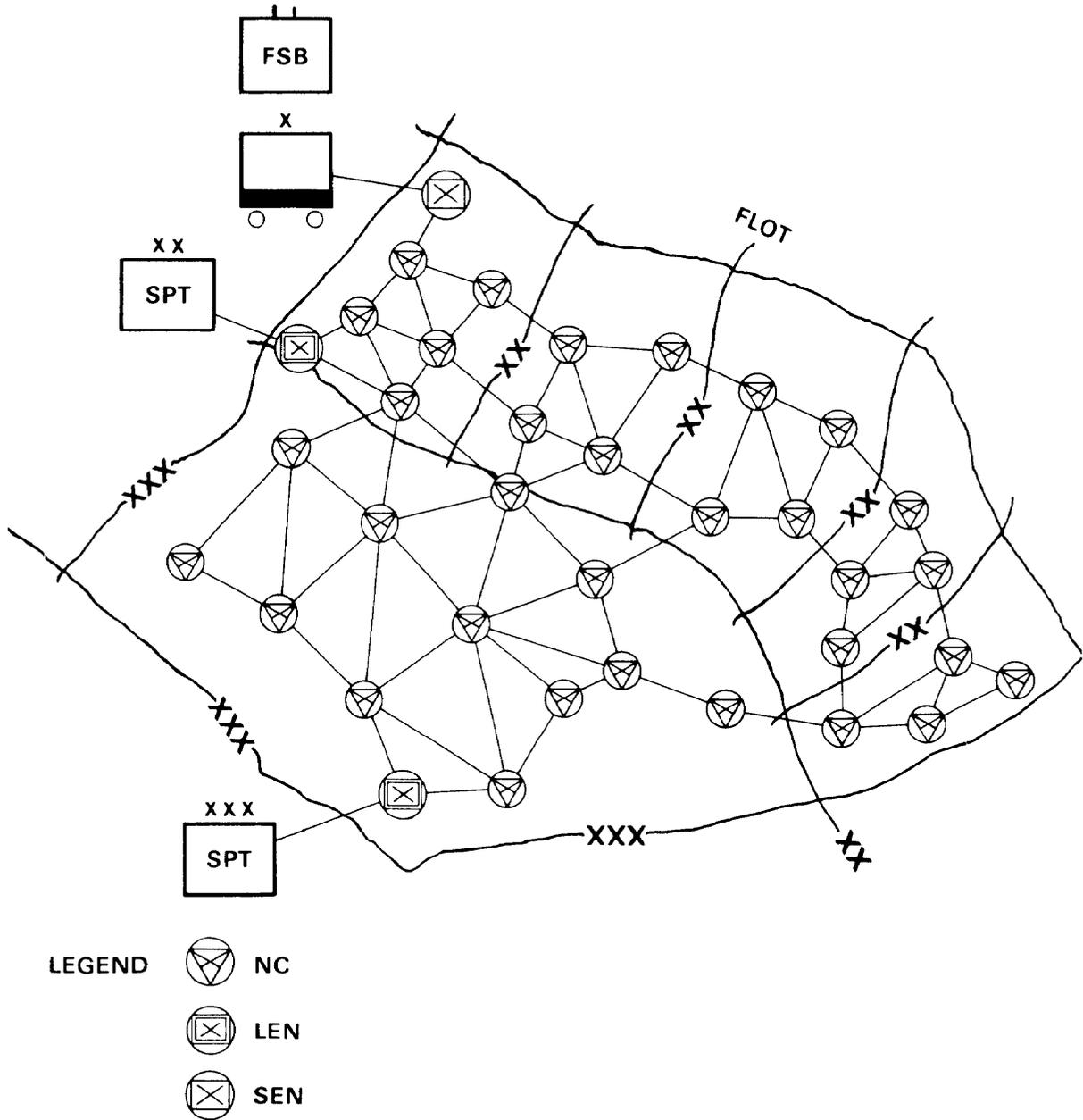
Figure 3-1. ALB C² system.

LEGEND

⬡ NC

⊠ LEN

⊠ SEN

Figure 3-2. Area communications system access.
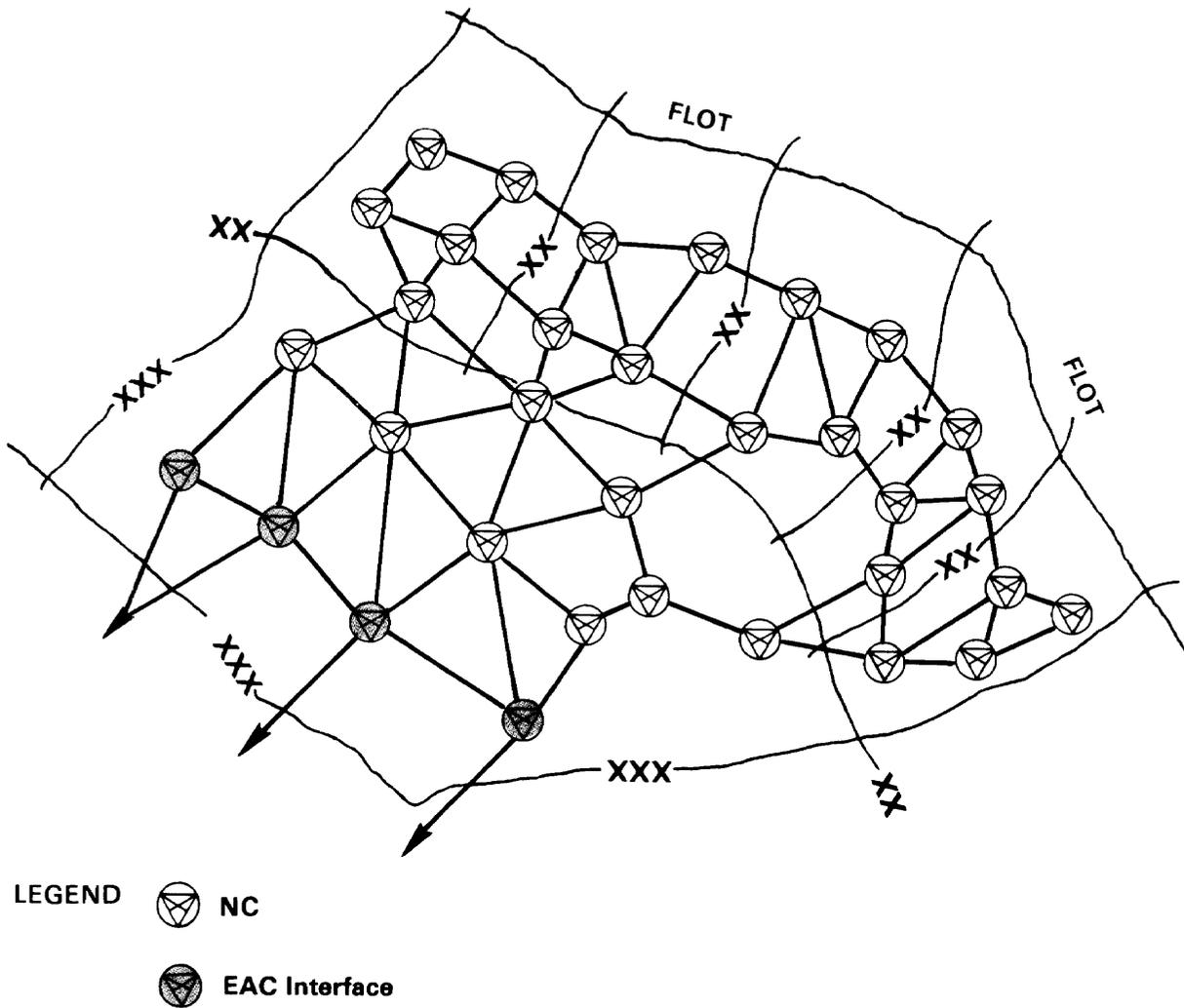
LEGEND

⊗ NC

⊗ EAC Interface

Figure 3-3. Example of area communications system
access for CSS units.

3-3.   Using CNR

CS and CSS units are spread throughout the battlefield. Due to the distances involved, we rely on HF, TACSAT, and FM radio to coordinate support when and where MSE area access is unavailable.

3-4.   MSE Support of a Rear CP

When a rear CP deploys within the corps area, it can be assigned a SEN from existing corps or division assets. The rear CP must communicate with all elements that support rear operations. This communication includes the various commands, staff agencies, headquarters, response forces, tactical combat forces, bases, and base clusters in the rear area. Support for this connectivity may require the deployment of additional wire access (LEN or SEN) communications support from the corps and division MSE assets. All signal leaders should read and understand FM 90-14 which contains the doctrine for conduct of rear operations.

3-5.   Supporting a Corps MSE Network

One of the biggest challenges to MSE unit leaders is ensuring that signal soldiers, deployed throughout the battlefield, receive the best support possible. All leaders, particularly junior leaders, must be resourceful, imaginative, and aggressive to ensure all areas of support (administrative and logistics) are provided. Coordination required to effect this scheme of support consumes much of the leader's time and effort. This results in an increased logistical management role for the leader. LENs and SENs can draw support from the units they are supporting. However, providing support to NCs, remote RAUs, and LOS relays deployed throughout the corps area requires using the area support concept (ASC). Corps extension nodes may operate in division areas. They fall under an ASC also.

3-6.   ASC for MSE Signal Units

a.   With MSE, signal elements can be assigned throughout the corps area as needed. We must adapt to the ASC once normal organizational lines are crossed. For example, when a corps NC (Figure 3-4) is needed to augment the MSE network in a subordinate division's area (Figure 3-5), that NC must draw its support from the unit responsible for signal unit support in that division area. That support comes from, or is coordinated by, the local division signal battalion.

b.   If divisional MSE elements are used within the corps area, the corps signal brigade and subordinate battalions must be responsible for supporting those divisional MSE elements. Based on staff advice, the commander in the corps signal brigade must determine the area support zones and responsibilities each battalion will assume.

c.   The current ASC applies to MSE operations. However, some unique logistics problems occur in MSE, specifically, fuel, rations, and electronic maintenance support.
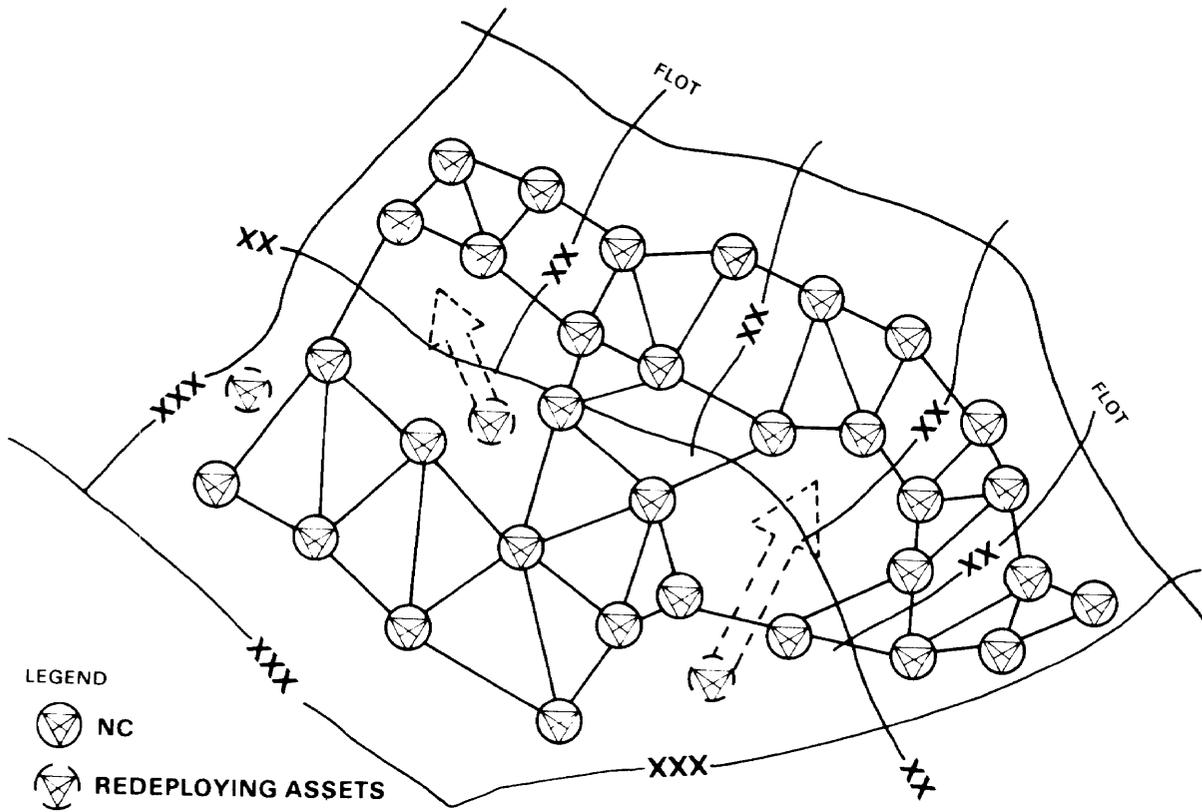
Figure 3-4. Corps redeploying NC.
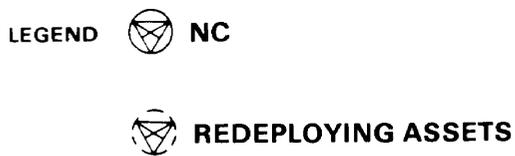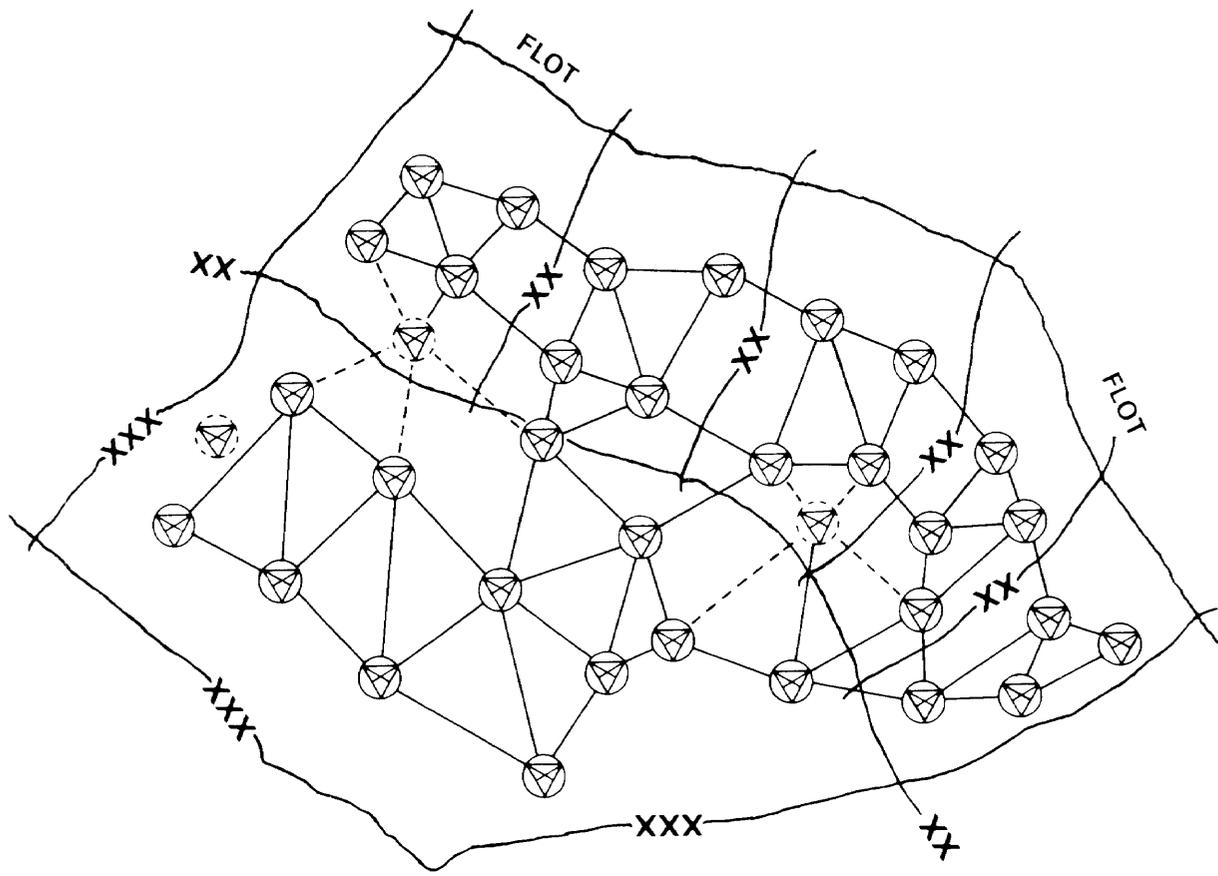
LEGEND ⬡ NC

⬡ REDEPLOYING ASSETS

Figure 3-5. Movement to support a subordinate division area.

(1) Fuel. The NCs in a static operating posture are refueled, if accessible, by a parent unit tanker. Without tank truck accessibility, the NSV shuttles fuel from the unit tanker's position to the node. If it is more convenient, the fuel can be shuttled from an area support center to the node. If an NC is preparing to move, the movement order from the

SCC contains specific instructions on routing to the nearest area support center or an area support center which lies along the specified route, whichever is the most convenient or effective. Extension nodes receive fuel from the unit being supported. Remote RAUs and remote LOS radio facilities (V3 relay or V2 NATO analog interface (NAI)) are supported by their own NC (the parent/master NC). The SCC receives its fuel support from the NC to which it is connected. If an NC is not in the parent unit's area of logistical support responsibility, full support comes from the signal unit with support responsibility for that area.

(2) Rations. The parent unit is normally responsible for troop feeding. However, it may be more practical under some circumstances to apply the same scheme of ration resupply as is used for fuel resupply. The team chief maintains ration status, reorders when resupply is required, and informs the parent/master NC of ration status before moving. When requested, movement orders contain information on the nearest area support center or an area support center en route to the new location.

(3) Network maintenance.

(a) The signal battalion's ability to perform up to direct support (DS) maintenance on its mission peculiar equipment is vital to successful battlefield signal support. Responsive forward deployed organic maintenance is required to keep a widely dispersed network operational. Close teaming of operator and DS maintenance personnel, ready access to on-board spares, and mission essential prescribed load list (PLL) items are all critical to providing responsive network maintenance and ensuring the commander's ability to win the battle.

(b) Each signal battalion has an electronic maintenance facility (AN/TSM-182) and several spares facilities (AN/TSM-183) to support MSE. The maintenance facility is normally deployed with the battalion headquarters, and the spares facilities are deployed at each MSE node. DS maintenance teams are deployed as far forward as required to meet network priorities and battlefield mission needs.

(c) Network maintenance generally consists of operator troubleshooting, fault isolation, and system restoration by replacing defective items from on-board spares and the unit's PLL. Equipment status is reported to the parent NMF. It then becomes the node manager's responsibility to report equipment failures to the SCC via the record traffic system in the NMF.

(d) When faults are beyond the ability of the operator, a DS maintenance team is sent forward to repair the failed system on-site. Defective equipment and components are evacuated to the battalion electronic maintenance facility for repair. If repairs cannot be performed at the battalion DS maintenance facility, the equipment is evacuated to higher echelons of maintenance through normal logistics

channels. (The next update to FM 11-37 will detail network maintenance support.)

3-7.   Conclusion

MSE is the primary tactical communications system for CS and CSS separate battalions and higher at echelons corps and below. MSE unit leaders must develop logistical support plans for their units to maintain continuous area communications support.