

CHAPTER 3

COMMAND, CONTROL, AND COMMUNICATIONS**3-1. Command and Control**

a. The MEDCOM is the senior medical headquarters assigned to a TO. It controls the majority of its assigned units through subordinate medical brigades. The medical brigade provides C2 of air and ground ambulance companies assigned to the corps through its subordinate MEDEVAC battalion headquarters. The MEDEVAC battalion with its attached units provides corps-level support to the divisions and area support to units operating within its sector of responsibility.

b. The AA company is normally employed in DS of a division and GS of a corps. The company is assigned to a medical brigade for C2. It may be further assigned to a MEDEVAC battalion. The designation of the type of C2 headquarters depends on factors such as mission, size of force, type of operation, anticipated duration, and medical resources assigned to the deployed force. When the AA company is in DS, it establishes liaison and provides aeromedical advice to the supported unit. During initial buildup or contingency operations, the senior medical C2 headquarters may be a medical brigade, MEDEVAC battalion, or medical task force headquarters.

3-2. Air Ambulance Company Command and Control Infrastructure*a. Company Commander.*

(1) The responsibility for command, control, and communications (C3) of the AA company begins with the commander. The company commander is responsible for what happens or fails to happen in the company. In addition, the commander alone is responsible for the outcome of his unit on the battlefield. The varieties of tasks that impact the AA company are unique. Although he commands a company-level organization, his focus of employment is often at division level and higher. These tasks require coordination with other aviation units as well as medical units, the integration of complex systems, and the sensible division of work. Air ambulance elements must be properly task-organized in order to accomplish all specified and implied tasks. The commander also has to integrate the critical support provided by other friendly elements.

(2) The commander analyzes the assigned mission, defines the requirements of the AA company, and directs its execution. All plans and orders are in concert with the senior commander's intent. Tactical decisions must constantly be aimed at synchronizing CSS efforts with those of other force assets. The commander must know the full range of the health threat. He must rely on the company staff and appropriate staffs of supported units. They advise and assist in planning and supervising operations. The commander must understand their capabilities and limitations.

b. First Sergeant. The first sergeant (1SG) is the senior enlisted advisor to the commander. He is the senior noncommissioned officer (NCO) in the AA company and supervises company headquarters operations. He plans, coordinates, supervises, and participates in activities pertaining to organization, training, and combat operations for the AA company. The 1SG maintains liaison between the commander and assigned NCOs; he provides guidance to enlisted members of the company and represents them to the commander. Due to the unique synchronization of aviation and medical assets, the 1SG must understand

and monitor the work environment of the diverse collection of unit military occupational specialties (MOSs). In addition, he is normally responsible for the following personnel and administrative functions:

- (1) Overseeing company-level administration.
- (2) Advising the commander of enlisted assignments, reassignments, promotions, and other personnel actions.
- (3) Supervising replacement activities, to include the orientation of newly assigned personnel.
- (4) Verifying and monitoring strength and personnel accounting reports, to include battle roster change reports and the Personnel Daily Summary.

c. Flight Operations Platoon Leader. The flight operations platoon leader is the executive officer. He must be prepared to assume command at any time. However, as the flight operations platoon leader, he has unique company-related responsibilities. He maintains personnel readiness through continuous training of all personnel. In addition, he maintains deployment readiness through the maintenance of equipment, effective load plans, and standing operating procedures (SOPs). He is responsible to the commander for the operation of the command post.

d. Flight Operations Officer. The flight operations officer functions as the company intelligence, operations, and training officer. Field Manual 101-5 covers the Intelligence Officer (US Army) (S2)/Operations and Training Officer (US Army) (S3) responsibilities in detail. He is responsible for the development and publication of the tactical standing operating procedures (TSOPs) (Appendix A) and other support policies and directives.

e. Aviation Unit Maintenance Platoon Leader. The AVUM platoon leader is the technical advisor to the commander for aircraft readiness, aviation maintenance policy and procedures, technical supply, production control, and quality assurance. He develops, integrates, implements, and monitors aviation maintenance operations. The AVUM platoon leader maintains interface with divisional AVIM, nondivisional AVIM, corps, installation, major Army command (MACOM), and DA maintenance units. During deployment operations, the AVUM platoon leader coordinates with supporting aviation maintenance units for AVUM support and Class IX air resupply.

f. Air Ambulance Platoon Leader. The AA platoon leader is responsible to the commander for the planning and deployment of the ASMS and the FSMTs. He provides the interface and liaison between the supported unit and the AA company (see paragraph *h*[3]). He is responsible to the operations officer for the development of the FSMT leader's guide.

g. Personal Staff.

(1) *Standardization officer.* The standardization instructor pilot is the key advisor to the commander on matters pertaining to aircraft standardization, utilization, and training. The standardization officer will—

(a) Develop, integrate, implement, monitor, and manage the aircrew training and standardization programs.

(b) Conduct the standardization and training interface from the AA company through the chain of command to the respected division, corps, installation, MACOM, DA, and joint Service agencies.

(2) *Safety officer.* The aviation safety officer advises the company commander on both aviation and ground safety matters. The safety officer will—

(a) Develop and implement company aviation and ground safety programs.

(b) Continuously monitor all company operations and evaluate them as they affect the overall safety program.

(c) Advise planners of critical safety issues associated with planned missions.

h. Coordinating Staff. The AA company does not have an organic coordinating staff. For this reason, the commander will have to appoint key additional duties to selected section leaders and/or warrant officers.

(1) *Supply officer.* The AA company does not have a supply officer on the TOE. However, the intense supply operation mission demands that an officer be appointed by the commander to this full-time position. This officer is the commander's technical advisor on property book, hand receipt, and budget matters. He facilitates requests for supply actions and monitors the unit's expensive operating budget. The supply officer will coordinate and facilitate all unit hand receipt inventories for the commander and hand receipt holders.

(2) *Personnel officer.* Like the supply officer, the personnel officer is an additional duty appointed by the commander. The personnel officer supervises the continuous mission of processing awards and preparing NCO evaluation reports, officer evaluation reports, and other command correspondence as required.

(3) *Liaison officer.* The liaison officer (LNO) provides the supported commander with technical and tactical advice on aeromedical evacuation matters to facilitate effective aeromedical evacuation support. He participates in the tactical decision-making process with the supported unit. Located at Appendix C is a LNO checklist to assist in preparing for this duty.

3-3. Command and Control Facilities

a. Company Command Post. The company commander will normally locate his command post (CP) with the supported unit's aviation brigade, but this decision is based on the evaluation of METT-TC. The CP is the primary C2 element of the AA company. It consists of those leaders required to conduct continuous current operations and to plan future operations. The flight operations officer normally

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supervises the CP. The CP includes the commander, the operations section, the communications section, and other elements as required. The CP monitors operations around the clock and serves as the pivot for AA coverage information for the supported unit. The CP has to maintain communication with the following units/elements for the specified reasons:

(1) The Army airspace command and control (A2C2) element of the supported unit has to keep real-time updates of current aviation weather, airspace control orders (ACOs), special instructions (SPINs), air tasking orders (ATOs), and other A2C2 information as required. This will normally be from the supported aviation brigade.

(2) The CP has to maintain continuous contact with the division medical planners when in support of a division to facilitate casualty information, MTF status, and critical medical information, as required.

(3) The CP has to maintain contact with forward deployed FSMTs. This is to ensure continuity of support, to include maintenance requirements, crew readiness issues, impending operations, and other support requirements.

(4) The AA company must be prepared to maintain contact with the MEDEVAC battalion tactical operations center (TOC) in order to keep the higher command advised of support provided. In the corps GS role, the AA company will normally coordinate its efforts through the MEDEVAC battalion S3.

b. Forward Support Medical Evacuation Team.

(1) The FSMT is the farthest forward element of AA support to a maneuver unit. The FSMT is normally comprised of three aircraft and MEDEVAC crews highly trained to provide continuous coverage to a maneuver brigade. The FSMT will normally establish their operating area, proximate to the FSMC in the BSA. This will facilitate communications and responsive MEDEVAC efforts for the maneuver brigade. The FSMT leader is the AA company's LNO to the maneuver brigade and must participate in the brigade CHS planning process. The FSMT relies on the supported unit for communications capabilities to respond to MEDEVAC missions. The FSMT leader must maintain constant communications with—

(a) *The forward support medical company commander.* This is accomplished through collocation with the FSMC. The FSMT leader must keep the FSMC commander advised of capabilities, limitations, and projected requirements for effective AA coverage.

(b) *The air ambulance company command post.* The FSMT leader must keep the AA company's CP advised of operations, maintenance status, crew status, and projected support requirements.

(c) *The brigade S3 air.* The FSMT leader must coordinate with the brigade S3 air for MEDEVAC airspace requirements in the brigade's airspace.

(2) During stability operations and support operations, the FSMT may be the only AA asset deployed in support of a joint or multinational operation. Detailed planning must take place to determine the best location for FSMT aircraft. The possibilities are diverse and are based on the evaluation of

METT-TC. However, the FSMT may be located with the aviation TF, an Echelon II MTF, or an Echelon III MTF (either Army or joint force).

(3) In the GS role, the FSMT may be employed in order to evacuate patients from Echelon II to Echelon III MTFs. In this case, the GS FSMT leader will have to ensure the team meets the airspace and communications requirements to fly between brigade, division, and corps boundaries to evacuate patients.

(4) During joint operations, the FSMT leader needs to establish communications links with all potential MTFs, to include hospital ships, joint MTFs, and so forth. This also includes implied tasks of coordinating airspace in and around these units.

3-4. Communications

Management and control of the AA company operations is dependent on the company headquarters' ability to communicate with its elements, the MEDEVAC battalion, the medical brigade, elements of the supported maneuver battalion/units, and other CSS units. Air ambulance company communications assets include amplitude-modulated (AM) and frequency-modulated (FM) radios and mobile subscriber equipment (MSE). The MSE is applicable to echelon corps level and below.

a. Communications Planning. A host-nation (HN) commercial communications system may be available. The area common user network interfaces with existing combined communications systems and any existing local telephone and telegraph systems. This is accomplished as outlined in applicable STANAGs and HN support agreements. It should be noted that military, civilian agency, and civilian law enforcement communications systems might not be compatible. Extensive communications planning is required for joint military-civilian stability operations and support operations. The company's operations platoon headquarters and the flight operations section must plan for communications requirements and usage for each phase of military operations—predeployment, deployment, sustainment operations, and redeployment.

b. Communications Support.

(1) Communications support for the AA company within a TO or stability operations and support operations is based upon its level of operations. In a TO, signal support will be requested through the corps Assistant Chief of Staff, G3 (Operations and Plans) and will be supported by the corps signal brigade. When the AA company is deployed as part of stability operations and support operations, signal support will be as addressed in the operation plan (OPLAN).

(2) Deployed elements of the AA company may rely on the MEDEVAC communications plan designed by the supported unit. Most units design their own plan to provide a system similar to the civilian 911 emergency communications system.

(3) The most efficient way to manage the evacuation of patients is to establish a dedicated MEDEVAC frequency in each zone of operation. For instance, in the maneuver brigade, the FSMC command net is an appropriate frequency to utilize for MEDEVAC requests. This facilitates a minimal

amount of frequency changes to transmit emergency patient information. Treatment elements can contact MEDEVAC elements quickly and efficiently and expedite a timely response. This principle should be applied to the greatest extent possible. In the case of division operations, the medical planners may establish a division wide MEDEVAC net, depending on evaluation of METT-TC.

(4) Once casualties leave the division area, formal medical regulating takes place between medical regulating office(r)s. In this case, corps medical planners should establish a communication link with the corps GS AA company. This will enhance patient evacuation support from Echelon II to Echelon III MTFs, intracorp MTF patient evacuation, and patient transfers to strategic aeromedical evacuation assets.

c. Staff Responsibilities. Each staff element of the company is responsible for adhering to signal support policies, procedures, and standards in their daily operations. The operations platoon headquarters coordinates communications support and interface requirements with higher headquarters and with the supporting signal unit.

d. Tactical Communications. Tactical communications architecture is generally divided into the following wide area networks:

- Area common-user system (ACUS).
- Combat net radio (CNR) system.
- Army data distribution system (ADDS).
- Broadcast communications system.

e. Area Common-User System.

(1) The ACUS is the primary means of communications. The ACUS is made of a series of network node switching centers connected primarily by line-of-sight (LOS) multichannel radios and tactical satellites. Interface between tri-service tactical communications (TRI-TAC) at echelons above corps (EAC) (Figure 3-1) and MSE at corps and division areas (Figure 3-2) provides an integrated communications network. Each MSE corps network includes at least two gateway connections to the EAC TRI-TAC network and adjacent corps. The TRI-TAC switch is programmed in the same way for the MSE gateway access into the corps network. This network provides voice and digital data transmission capabilities for C2, operations/intelligence, administration, and logistics functions.

(2) The ACUS provides a secure mobile, survivable communications system capable of passing voice, data, and facsimile (FAX) at EAC and below. Additionally, it provides a direct interface to other Services, NATO, CNR, and commercial communications systems. The ACUS is composed of multiple communications nodes with network features, which automatically bypass and reroute communications around damaged or jammed nodes. It integrates the functions of transmission, switching, control, and terminal equipment (voice and data) into one system and provides the user with a switched telecommunications system extended by mobile subscriber radiotelephones. Nodes are deployed from the

EAC rear boundary forward to the maneuver brigade rear area based on geographical and subscriber density factors. Node centers (NCs) make up the system's assemblage. Extension switches permit wire-line terminal subscribers (telephone, FAX, and data) to enter into the total area communications system.

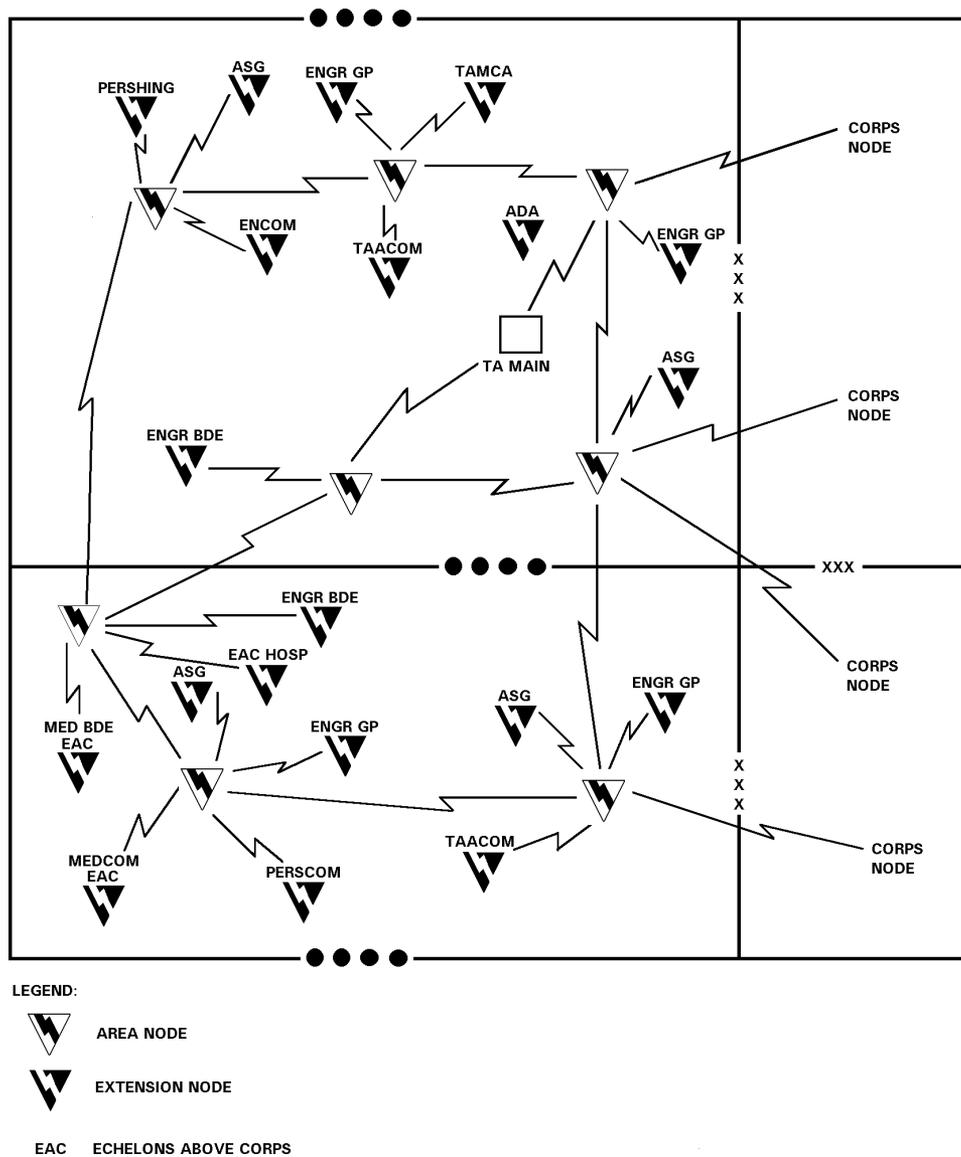


Figure 3-1. Sample area common-user system access at echelons above corps via switching nodes.

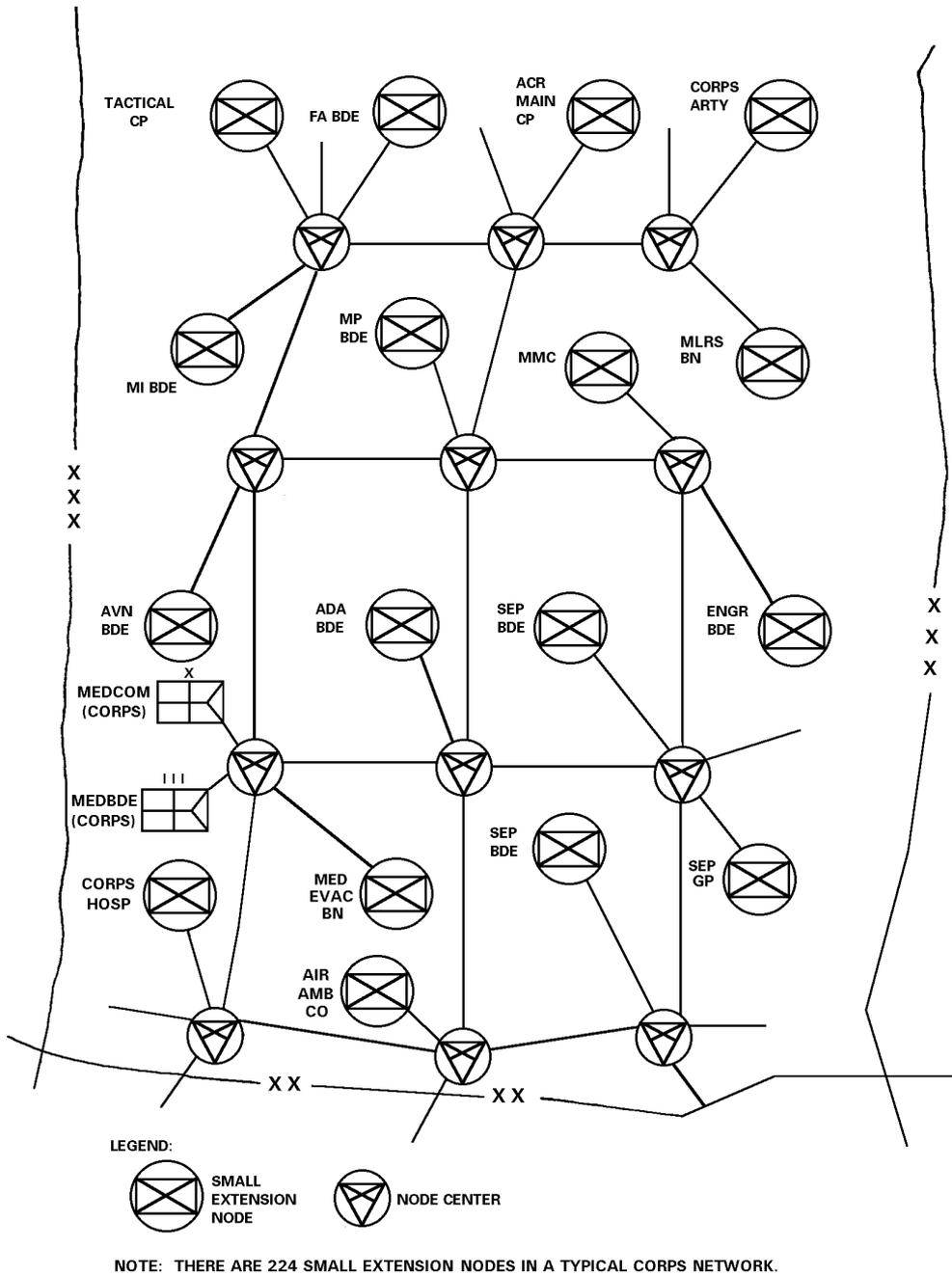


Figure 3-2. Typical division small extension node deployment.

(3) The AA company can enter the ACUS through radio access units (RAUs) or small extension nodes (SENs) operated by the supporting signal battalion. The system control centers (SCCs) provide the processing capability to assist in overall network management. At echelons corps and below, the MSE system lets subscribers communicate with each other using fixed directory numbers regardless of a subscriber's battlefield location. The MSE system is comprised of the following five functional areas:

- Area coverage.
- Subscriber terminals.
- Wire subscriber access.
- Mobile subscriber access.
- System control.

The AA company will participate in the first four of the above functional areas. Figure 3-3 shows how the system integrates the functions of transmission, switching, control, and terminal equipment.

(a) *Area coverage.* Area coverage means that the MSE system provides common-user support to a geographic area, as opposed to dedicated support to a specific unit or customer. Node centers are under the control of the supporting signal officer.

(b) *Subscriber terminal (fixed).* The MSE telephone, mobile radiotelephone, FAX, and data terminal, as part of the ACUS, are user-owned and operated (Figure 3-4). The company's operations section is responsible for running wire to the designated junction boxes. These boxes tie the company's MSE telephones into the extension switches, which access the system.

(c) *Wire subscriber access.* Wire subscriber access points provide the entry points (interface) between fixed subscriber terminal equipment owned and operated by users and the TRI-TAC and MSE area system operated by the supporting signal unit. The company's switchboard may tie into the area system. See FM 11-50 for definitive information pertaining to an MSE area communications system. The commander will designate the company's wire net system based on the mission. The deployed FSMTs must coordinate with the supported unit to access the MSE system.

f. *Combat Net Radio System.* The CNR equipment includes both the improved high-frequency radio (IHFR) system and the single-channel ground and airborne radio system (SINCGARS). These radios provide the primary means for voice transmission of C2 information. They provide a secondary means for transmission of administrative/logistics data. Data transmission will be required when data transfer requirements cannot be met by using the TRI-TAC and MSE systems. The improved high-frequency AM radio series provide mid-to-far-range communications capability. They interface with other AM high-frequency radios and have push-button frequency selection. The SINCGARS series' FM radios are designed for simple and quick operation using a 16-element keypad for push-button tuning. They are capable of short-range operation for voice or digital data communications and interfacing with the AN/VRC-12 series of FM radios. They also can operate in a jam-resistant, frequency-hopping mode.

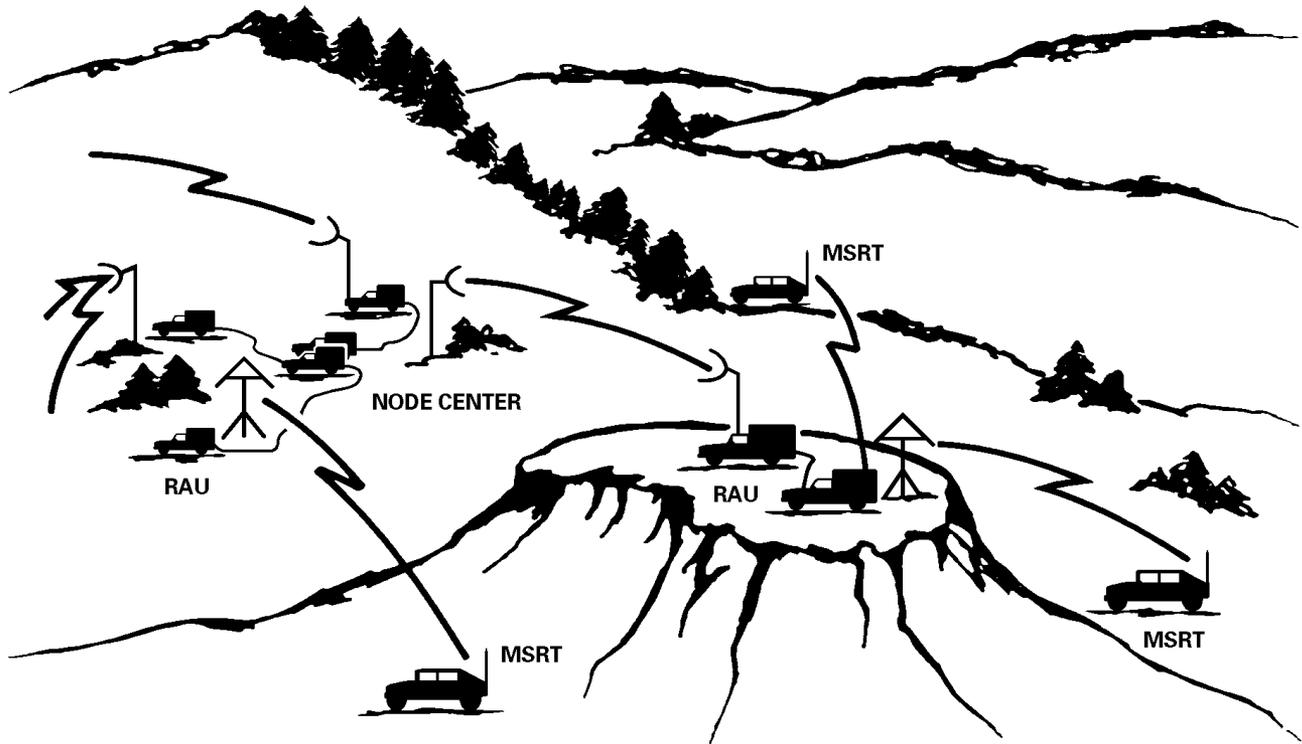
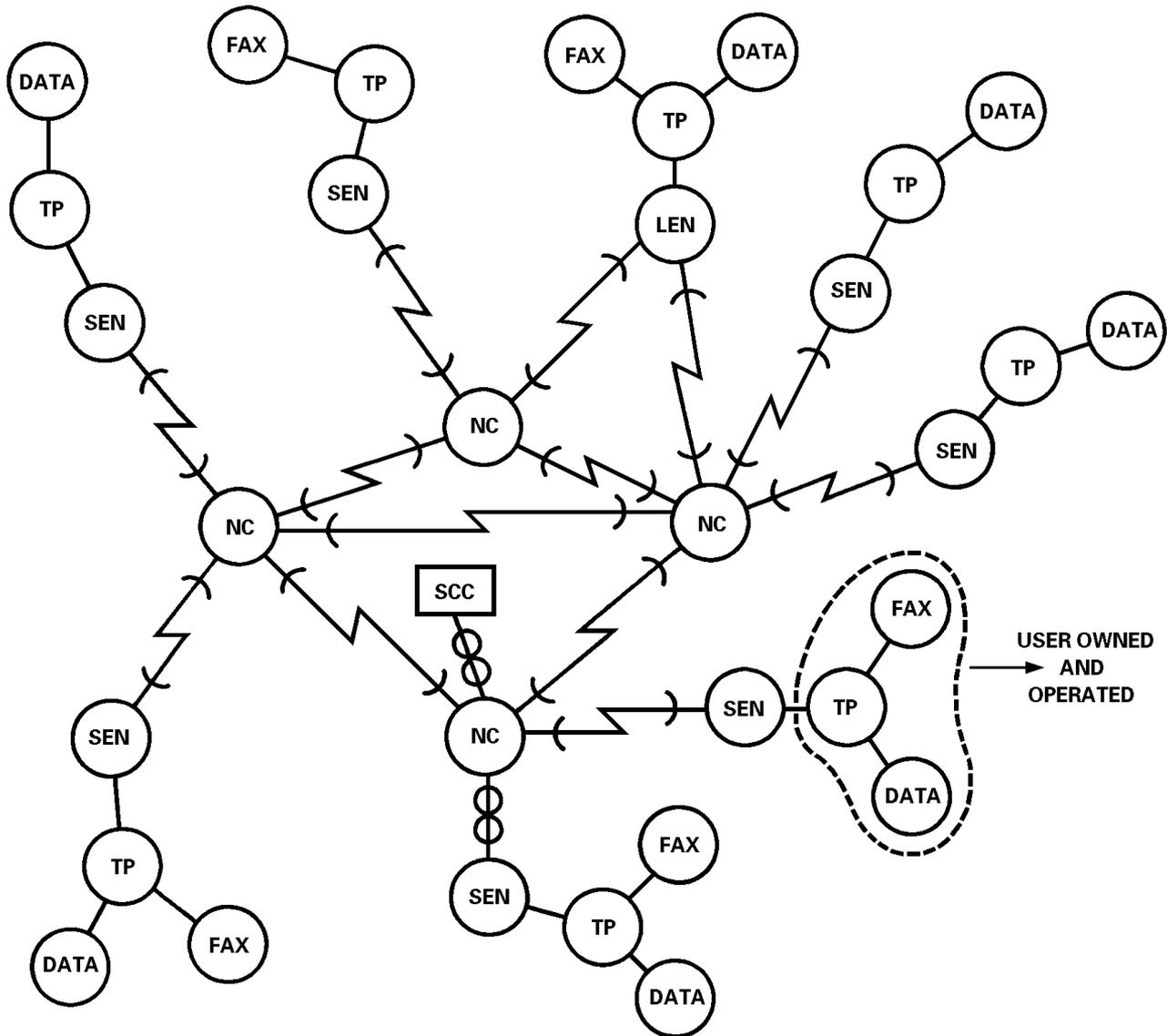


Figure 3-3. Typical mobile subscriber connectivity.

g. Army Data Distribution System. The ADDS is an integrated C2 communications system providing near real-time transmission capabilities to support low-to-medium volume data networks. The system automatically relays information from its origin to the destination transparent to the user. Subsystems are the joint tactical information distribution system and the enhanced position location reporting system.

h. Broadcast Communications System. This system uses technology similar to commercial radio stations. Transmit-only stations send information to high frequency radio systems, satellites, unmanned aerial vehicles, or other means. Weather, intelligence, and position/navigation (POS/NAV) information is derived from the broadcast system.

i. Company Radio Nets. The AA company depends on AM and FM radios and the area communications systems to operate. The company's radio nets are shown in Figure 3-5.



LEGEND:

DATA	TACTICAL ARMY CSS COMPUTER SYSTEM / ARMY TACTICAL C2 SYSTEM / MEDTCU	NC	NODE CENTER
FAX	AN UXC-7 FACSIMILE	SCC	SYSTEM CONTROL CENTER
LEN	LARGE EXTENSION NODE (SWITCHBOARD)	SEN	SMALL EXTENSION NODE (SWITCHBOARD)
		TP	DIGITAL NONSECURE VOICE TELEPHONE (DNVT-TA1942U)

Figure 3-4. Example of fixed subscriber terminals.

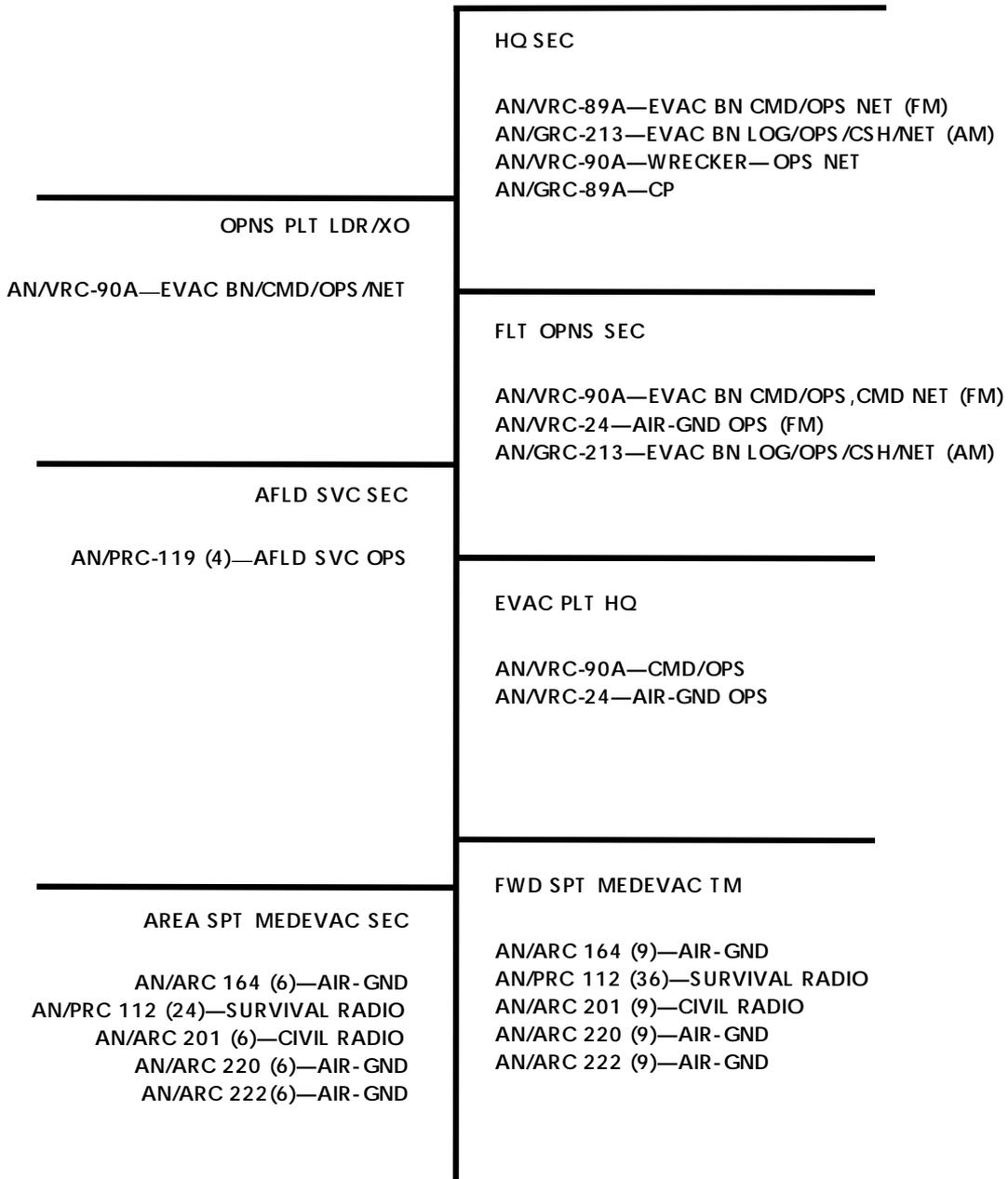


Figure 3-5. Air ambulance company command/operations net.

j. Signal Security. As part of the overall security program, all company elements must practice signal security (SIGSEC). The operations officer is responsible for SIGSEC and communications security (COMSEC). Some considerations include—

- Using terrain features, such as hills, vegetation, and buildings, to mask transmissions.
- Keeping transmissions short (less than 20 seconds if possible).
- Reporting all COMSEC discrepancies to appropriate authorities.
- Maintaining radio and radio-listening silence; using the radio only when absolutely necessary.
- Distributing codes on a need-to-know basis.
- Using only authorized call signs and brevity codes.
- Using authentication and encryption codes specified in the signal operation instructions (SOI)/air net control device (ANCD).