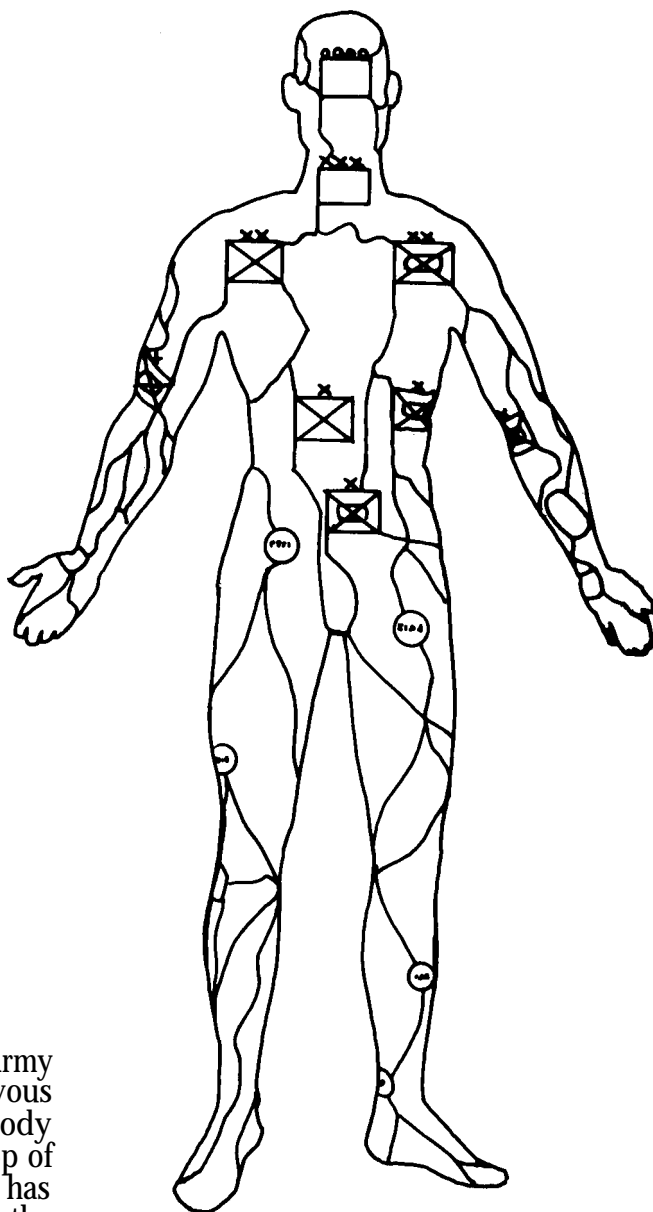


The C-E System



3-1. Introduction

The communications system of the Army in the field may be compared to the nervous system of the human body. Like the body which has nerves extending from the top of the head to the tip of the toes, the Army has communications circuits extending from the water's edge to the forward edge of the battle area (FEBA). In order for the Army to be responsive to its mission, the communications system must be reliable and provide rapid and secure exchange of information throughout the chain of command.

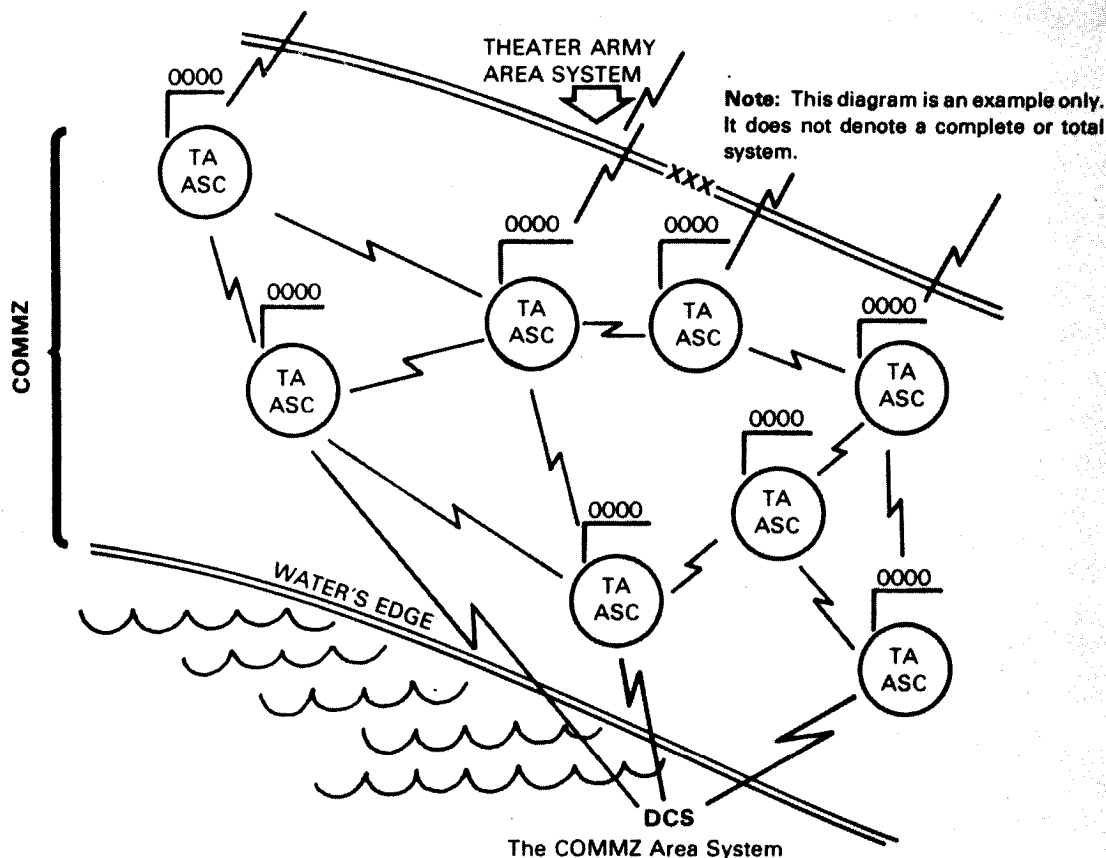


Figure 3-2. The COMMZ Area System

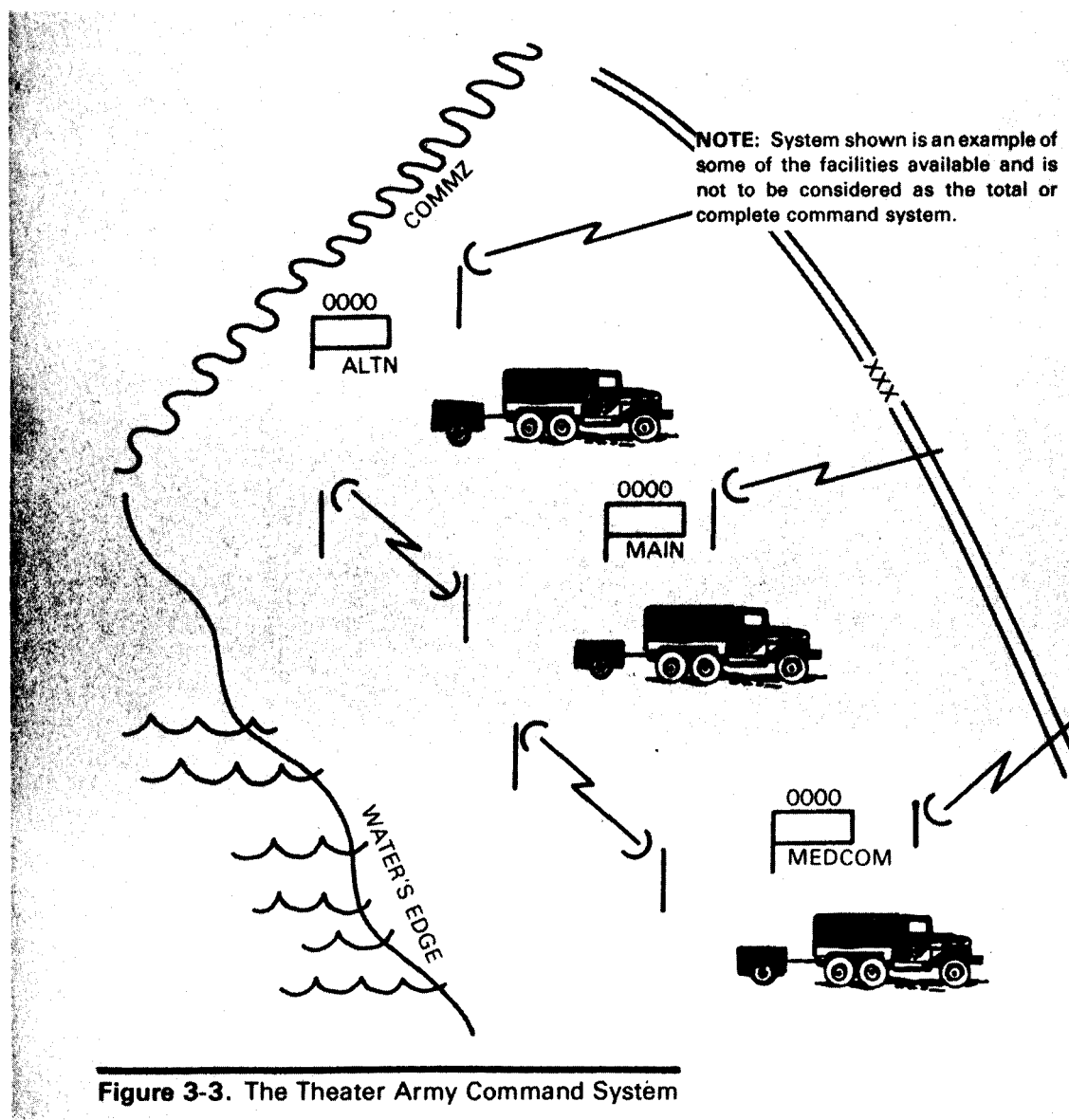
3-2. Theater of Operations

The communications system is widely dispersed over the entire theater of operations. The theater of operations is divided into the *combat zone* and the *communications zone* (COMMZ) (when adequate terrain is available).

a. The *combat zone* is that part of the theater of operations that is required for combat operations. The combat zone includes the ground, air, and sea areas where the commander directly influences the progress or outcome of operations by maneuvering his ground-gaining elements through delivery of firepower using fire support systems under his control or command. The size of the combat zone depends on the area of interest, mission, organization, and equipment of the force involved and the physical environment of the country. For tactical control, the combat zone may be divided into corps, division, and separate brigade areas. The commander of the unified command designates the rear boundary of the combat zone; the boundary may change as required by displacement of the combat forces.

b. The COMMZ is that part of a theater of operations behind the combat zone. It contains the communications facilities, logistics support elements, and other agencies required for the immediate combat service support of the field forces. The COMMZ includes sufficient area for the operation of supply, evacuation, transportation, and combat service support installations and for their defense. The COMMZ also includes any area necessary for the operation or support of Navy and Air Force elements based outside the combat zone. The rear boundary of the COMMZ is usually the rear boundary of the theater.

c. The organization of a theater of operations varies with the type of theater, the types of forces in the theater, and the nature of the operations planned. FM 100-10 provides a more complete discussion of the territorial communications zone.



3-3. Area Communications

a. In the COMMZ, units of the theater communications command (army) (TCC(A)) install, operate, and maintain an area communications system. This area communications system consists of area signal centers (nodes) so situated throughout the theater army that a major subordinate headquarters located anywhere in the corps rear area or the theater army service area has ready access to the signal communications facilities of one of the nodes. These area signal centers are interconnected by multichannel communications facilities in a manner that permits routing from one area signal center to another through several paths. The requirement of the mission and the location, and size of units determine the number of area signal centers (nodes) established in the COMMZ.

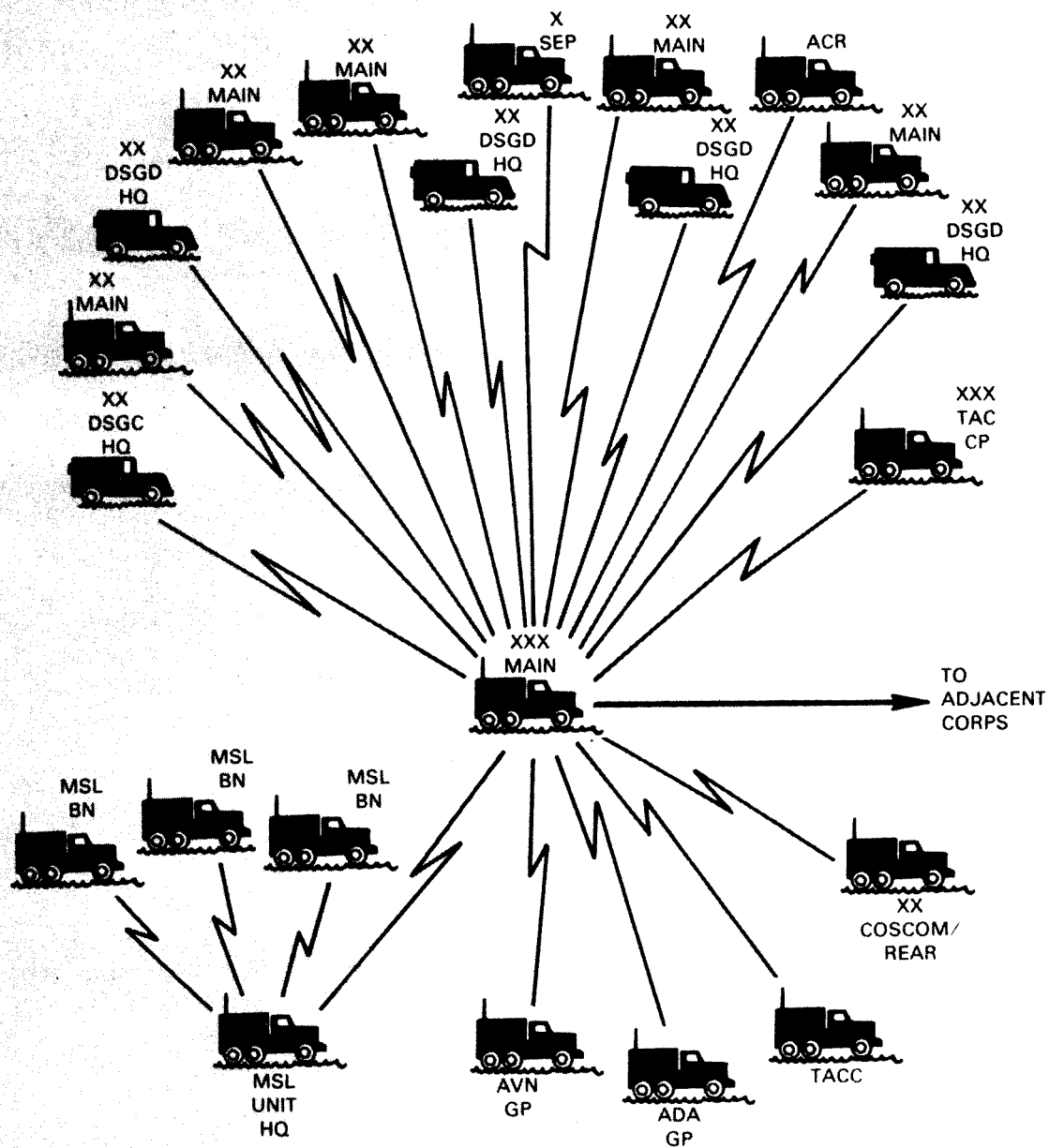


Figure 3-4. Corps Command System

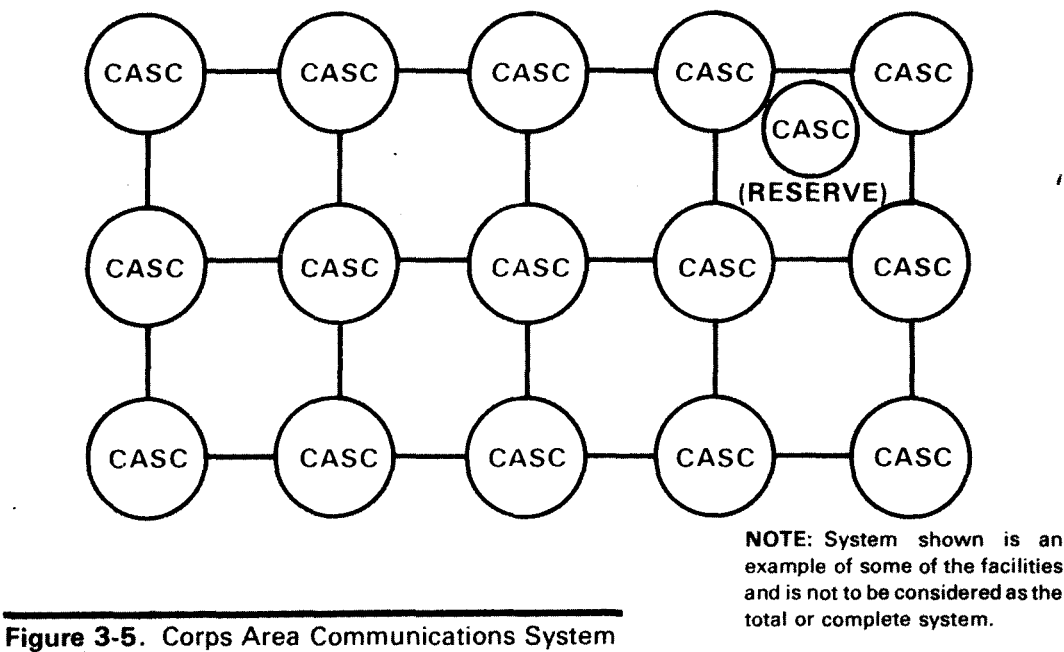
b. Also installed in the COMMZ is a command communications system. This system is superimposed on the area system to form an integrated network. Units of the TCC(A) install, operate, and maintain the theater army command communications system. The command system has multichannel voice communications, radio teletypewriter, and messenger service facilities. These facilities interconnect the theater army main and alternate signal centers and extend from these signal centers direct to

headquarters of major subordinate commands, such as the corps. Theater army signal units normally furnish the teams and equipment that are required to terminate the theater army command communications system at the subordinate headquarters.

c. There is only a limited requirement for single channel radio net facilities within the COMMZ, but a single channel net is provided as a backup to the multichannel links for special communications. Detailed information on theater army communications is contained in FM 11-23.

3-4. Corps Communications System

a. The corps communications system operates in the combat zone and provides communications for corps units. It is an integrated system employing multichannel communications facilities to provide service on both a command and area basis plus single channel command radio. Direct links are provided from the corps main to attached divisions and selected subordinate units within the corps area. The area communications system is interconnected with the command system and consists of no more than 16 area signal centers (nodes) situated to provide ready corps-wide access. The corps system also interconnects theater army, adjacent corps, and divisions.



b. The corps area system may be employed as a grid, tandem, or combination grid and tandem network utilizing no more than 16 corps area signal centers (CASC). Usual employment is 15 CASC with one held in reserve for replacement/augmentation. Defense Communications System (DCS) entry into the system is based upon technical capability and command requirements.

c. Each CASC furnishes multichannel radio and wire facilities and local field wire and cable circuits to units in the vicinity requiring the service. Each area signal center also—

- (1) Furnishes telephone, telecommunications center, teletypewriter, data, cryptographic, and limited messenger services for units and installations in the area.
- (2) Provides patching and switching of telephone, teletypewriter, and data circuits.
- (3) Provides radio-wire integration (RWI) and retransmission services.
- (4) Provides interface with the DCS at selected sites (nodes).

d. The corps command communications system normally consists of direct links between corps main and attached or assigned major subordinate commands. Links are also provided to the corps tactical command post (TAC CP), corps rear/corps support command (COSCOM), and adjacent corps. For additional information on communications, consult FM 11-50, FM 11-92, and FM 24-1.

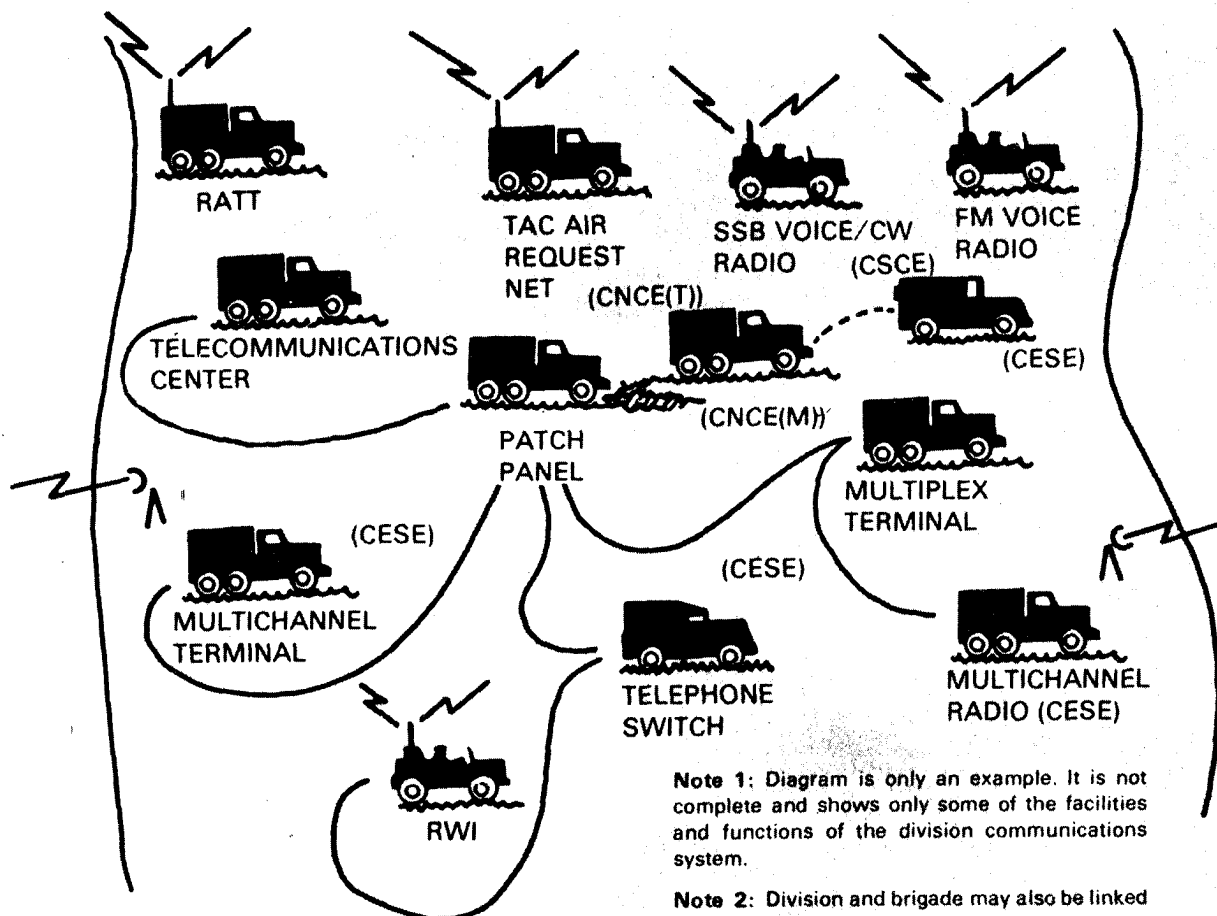


Figure 3-6. Division Signal Communications System

3-5. Division Communications System

The division uses an area communications system, a command communications system, RATT nets, and FM single channel radio nets to provide the commander with the necessary communications to effectively command and control his troops.

a. The area system provides communications for administrative, logistical, and maintenance support. It also supplements the command system and provides access to the multichannel system for any support elements located in the vicinity of an area node.

b. The command system provides the means necessary for division tactical operations and insures the priority of command/control communications. (See FM 11-50 for additional information.)

c. RATT nets are established between echelons of the division to supplement and as backup to the command and area multichannel systems.

d. Single channel FM voice nets are established between echelons of the division to provide the commander with a mobile, flexible means of command/control during the heat of battle when time is of the essence.

e. With the use of RWI stations, the commander has access to the area and command multichannel systems even though he may be in a remote area or an aircraft with only FM radio for communications. (See TC 24-3.)

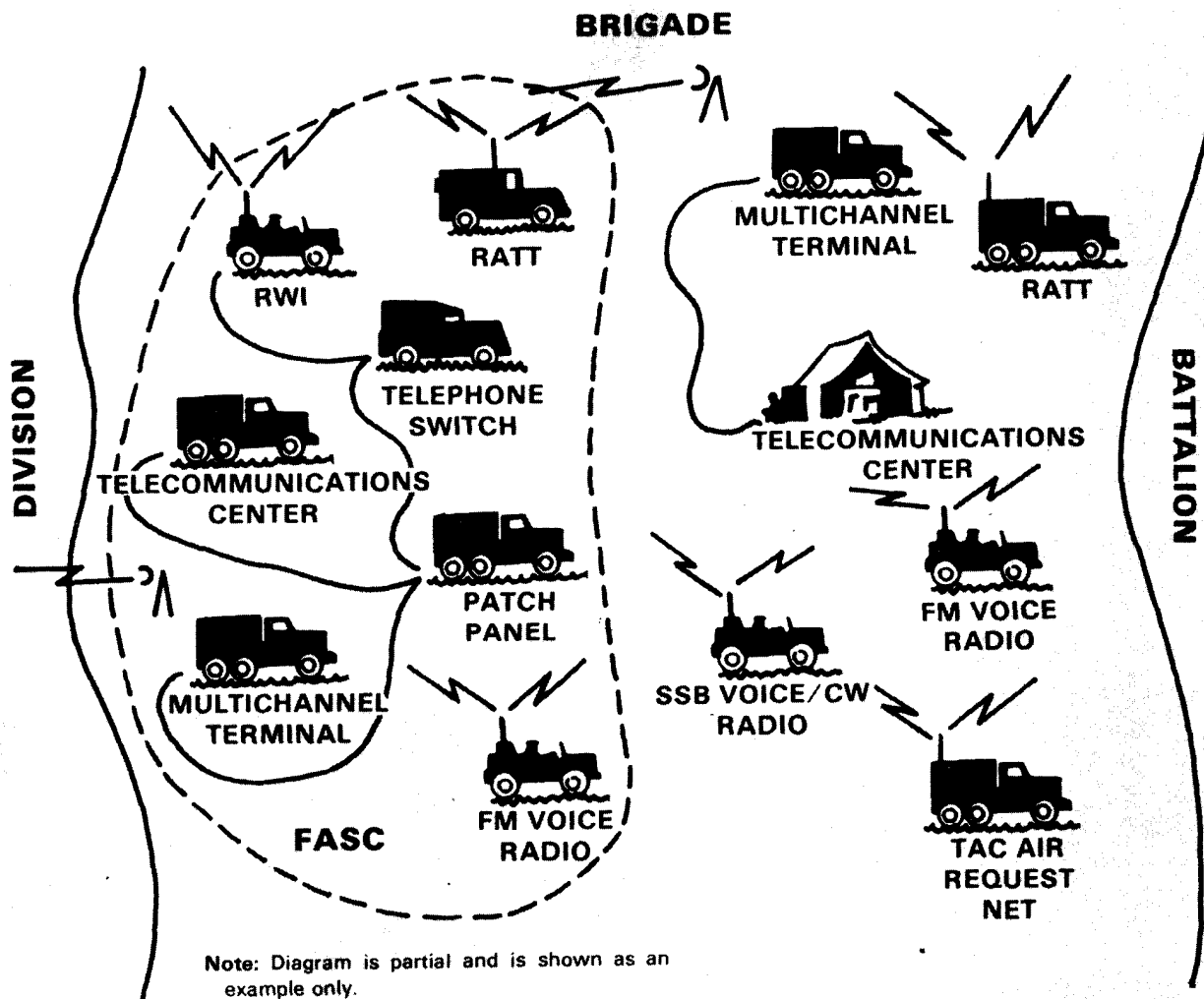


Figure 3-7. Brigade Communications System

3-6. Brigade Communications System

The brigade communications system functions as an integral portion of the overall division communications system and serves as its forward terminus. The brigade headquarters is connected with the main echelons of the division by multichannel radio and/or cable provided and operated by division signal battalion personnel. Forward area signal centers of the division provide communications links between brigade and combat support and combat service support units. RATT sets are used in the brigade area to operate in the division RATT nets to supplement and back up the division multichannel system.

FM single channel radio nets are established in the brigade area and between the division and brigade. These radios are the primary means of communications during the heat of battle when instant reaction to orders is essential to the outcome of the battle.