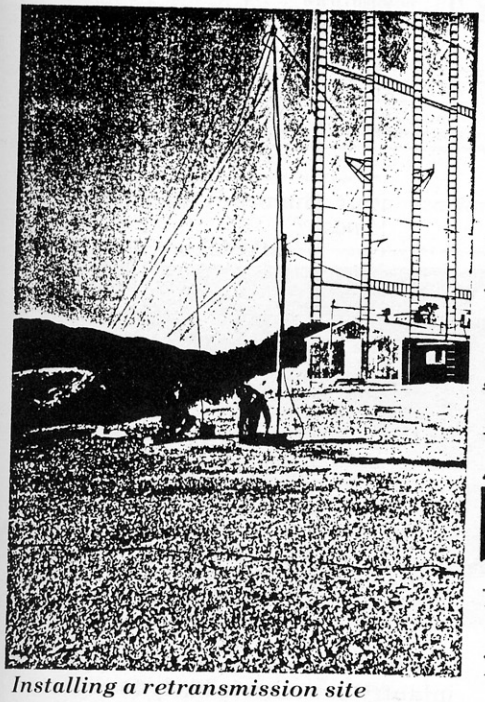
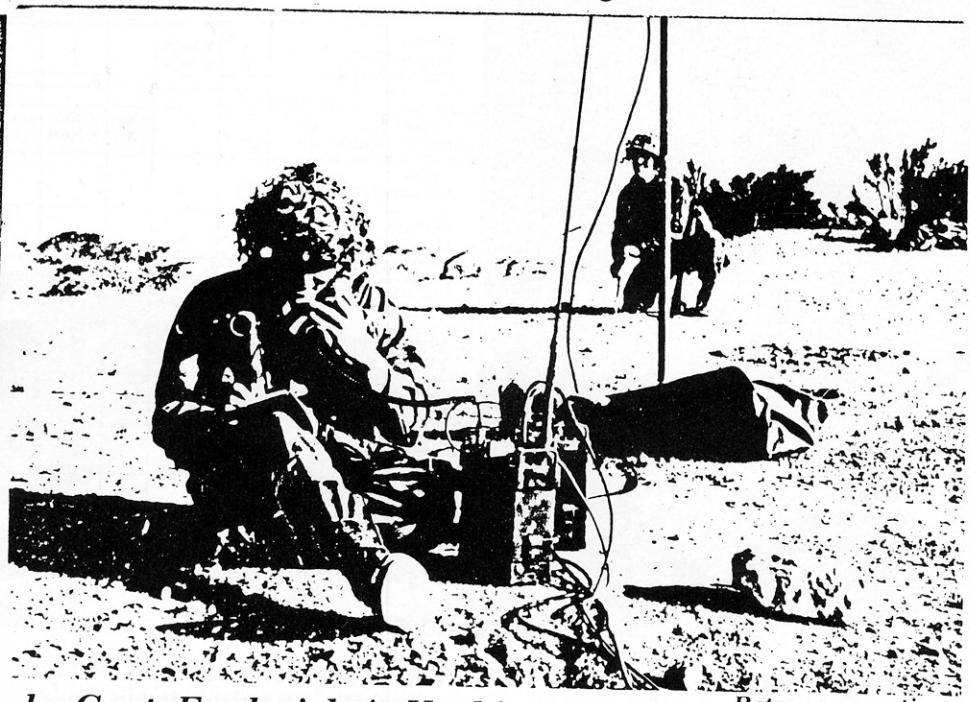
Communications in the light infantry battalion



Installing a retransmission site



Retrans operations

by Capt. Frederick A. Yochim

Unique to light infantry is the need for* all *communicators to be completely proficient in* all *the tasks that they are called on to perform. They must be able to "make do" in every tactical situation.

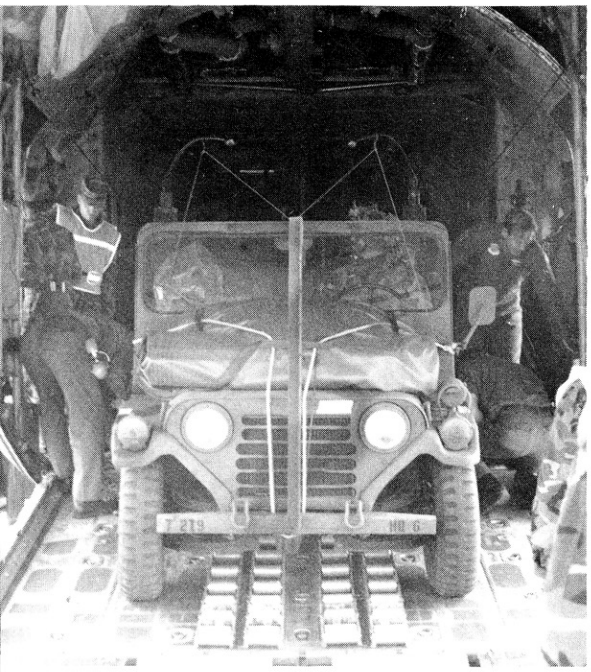
On 1 October 1985, the 7th Infantry Division was formally recognized as the Army's first combat capable light infantry division. This event marked the end of the beginning of the 7th Division's conversion to a strategic ready force, deployable anywhere in the world to meet threats to vital U.S. interests. The challenge to the 7th Division's communicators during this period was to continuously provide tactical communications support to existing units while simultaneously shedding personnel and equipment to meet mandated conversion thresholds. These efforts have resulted in flexible, austere, and quickly deployable unit communications.

Before discussing communications in the Division's most important maneuver element, the light infantry battalion, we need to understand what light infantry is—and is not. Rather than just downsized conventional infantry, light infantry is characterized by a specific tactical style which incorporates stealth, surprise, effective use of poor terrain, and night operations. Widely dispersed companies, platoons, and squads conduct coordinated, small unit ground attacks at the time of their choosing. They move primarily by foot; however, they can integrate air assault operations when extended range and speed are required. Light fighters must, by necessity, have a greater measure of tactical skill, self-reliance, personal endurance, and innovativeness than other soldiers in order to defeat the enemy they are likely to encounter. Light leaders must be able to do everything their soldiers do as well as demonstrate the ability to lead from the front. Often they must exercise command and control under extremely adverse conditions, coordinating highly decentralized operations into a consolidated effort with a minimum of communications and logistical support.

Battalion communications

Austerity and innovation are the words which best describe light infantry battalion communications. A shortage of organic personnel and equipment necessitates a careful use of communication assets and an ability to "make do" in every tactical situation. This is wholly in keeping

Loading the HMMWV aboard a C-130



	BDE CMD NET	BN CMD NET	BDE A/L NET	BN A/L NET	BDE INTEL NET	BN INTEL NET	CO CMD NET	ANTI-ARMOR NET	MORTAR PLT NET	RIFLE PLT NET
BN CDR VRC-49 PRC-77 (WALK)	X X	X X								
BN XO PRC-77			X	X						
BN S-1 PRC-77				X						
BN S-2 PRC-77					X	X NCS				
BN S-3 VRC-46 (TOC) PRC-77 (WALK)	X X	X NCS X NCS		X X						
BN S-4 VRC-47 PRC-77 (WALK)			X X	X NCS X NCS						
CESO VRC-49 (RETRANS)	X	X								
CO CDR PRC-77		X					X NCS			
RIFLE PLT LDR PRC-77 PRC-68							X NCS			NCS UN-SECURE
MORTAR PLT LDR VRC-47		X							X NCS	
ANTI-TANK PLT LDR VRC-47		X						X NCS		
SCOUT PLT LDR PRC-77		X								
MEDIC PLT LDR/ AID STATION GRC-160				X						

Figure 1. Battalion Internal and External Radio Nets

with the light infantry concept and is important to understand when discussing C&E systems employment.

The primary means of communication at battalion level are VHF FM radio, wire, and messenger. The light infantry battalion possesses no organic AM SSB (RATT) or HF radio, though on occasion, its communications can be augmented with a man-portable single channel TACSAT (AN-PSC3). But it relies primarily on FM radio and motorcycle messenger during offensive operations and on wire during defensive operations. Indeed, the battalion often uses motorcyle and foot messengers during extended periods of radio listening silence to enhance the element of surprise. The matrix in Figure 1 portrays the types of radio systems employed in each major internal and external net. VINSON series crypto devices are used to secure these nets.

The mission of the communications and electronics staff officer (CESO) and the communications platoon is not much different than that of other maneuver or fire support battalion communications teams. What is unique to light infantry is the need for *all* communicators to be completely proficient in *all* the tasks that they are called on to perform. This is accomplished (time and situation permitting) by intensive cross-training both in garrison and in the field. The 31K must know how to troubleshoot and make basic repairs of FM radios and how correctly to install field wire lines and tactical switchboards. This is an ongoing, never ending process; however, it pays big dividends in stressful tactical situations where the demands for communications support are great, but personnel assets are limited (see Figure 2). The central figure in this training process is the principle C&E trainer, the battalion tactical communications chief.

Operational considerations

When the battalion deploys, communications personnel are integrated with other headquarters elements. Since only one high mobility multipurpose wheeled vehicle (HMMWV) is authorized for the platoon, all equipment, tools, and spare batteries must be packed on it. And since USAF loadmasters follow strict guidelines on vehicular weight allowances and hazardous cargo (such as lithium batteries) when inspecting equipment for air movement, careful load planning is essential for air deployments.

It is almost axiomatic that the light infantry battalion is likely to choose terrain with poor line-of-sight (LOS) characteristics. When this happens, the HMMWV, with its secure VRC-49, will probably be used as a retransmission facility. Since it is impractical for an organizational maintenance and resupply activity to locate on a hilltop, personnel and equipment must consolidate initially at either the battalion tactical operations center (TOC) or the trains area, after which normal tactical installation and maintenance procedures can be implemented.

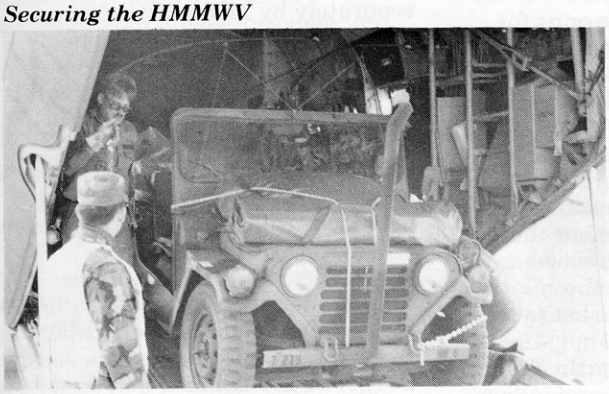
The light infantry battalion needs to provide resupply and maintenance assistance to the headquarters elements and deployed companies from a position as far forward as possible. One method that has proven successful is to divide the communications platoon into two teams. One team remains at the TOC and the other team is at the combat trains. If the combat and field trains are not co-located, then a two man section is behind at the field trains to provide a base line of support there (assisted by the team at the combat trains if necessary), and to coordinate with the forward teams for evacuation of equipment to the DS maintenance

Battalion Headquarters		
CESO Captain 25A 5M6B		
Battalion Communications Platoon		
TAC Comm Chief SFC 31V40 CBT Radio TM Chief SGT 31K20 CBT Signal TM Chief SGT 31K20 TAC Comm Sys Sup SGT 31V20 Radio Operator SP4 31K10 Wire Installer SP4 31K20(2) Radio Operator PFC 31K10 TAC Comm Sys Op/Mech PFC 31V10(5) Wire Installer PFC 31K10(2)		
A Company	**B Company**	**C Company**
TAC Comm Chief SSG 31V30 Radio Operator PFC 11B10	TAC Comm Chief SSG 31V30 Radio Operator PFC 11B10	TAC Comm Chief SSG 31V30 Radio Operator PFC 11B10

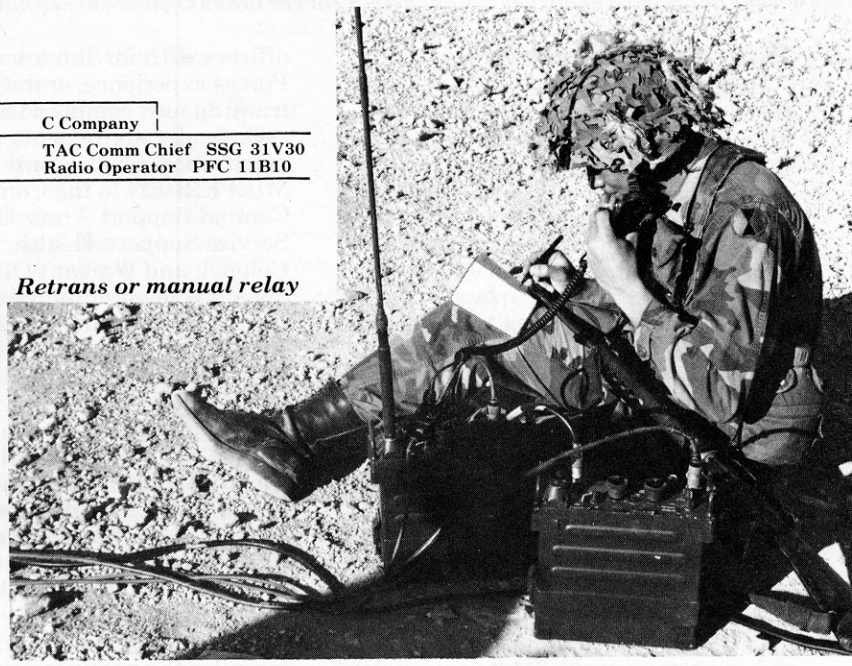
NOTE: HHC has no authorized C&E positions except RTOs (PFC 11B10) who are assigned to the scout, mortar and anti-tank platoons.

Figure 2. C&E Personnel Authorization

Securing the HMMWV



Retrans or manual relay



activity for repair. The two forward communications teams are identical in composition and interchangeable, thus maximizing flexibility and responsiveness to the changing tactical situation. The biggest advantage of this configuration is that the forward deployed companies, which are often without any vehicles to speed up logistical support, receive technical assistance and resupply quickly with minimum disruption to their tactical operations.

Tactical and technical considerations

As noted above, good light infantry terrain is most likely to be unsuitable for LOS communications. This situation can only be overcome by planning and careful use of available resources. Alternatives to FM radio must always be considered. In many cases, terrain, distance, and even weather will necessitate the use of motor messenger and wire. When FM is to be used, directional antennas, terrain masking, and use of remotes are essential. Defensive EW measures must be used at every level in the battalion; it is unwise and unsafe to assume the enemy lacks ECM capabilities even in the low/mid intensity combat environment in which the light infantry battalion may find itself.

Since there are relatively few vehicles in the battalion, everything that is used, fixed, worn, and eaten must fit in a rucksack. This creates a special problem for radio and wire equipment. One successful alternative to carrying bulky and heavy RL-159s and DR-8s is the WD-36 Combat Assault Wire. This nonrecoverable field wire comes in lightweight 1/2 mile spools and can be easily carried. It is perfect for internal company wirelines and is much better than WD-1.

In many cases it is not feasible to deploy OE-254 and RL-292 antennas, especially in the rifle companies. However, well made field expedient antennas provide a good alternative. They can be quickly assembled on site by the company communications chief and are easily carried in a rucksack. These antennas are used in many situations to increase the range of the PRC-77.

Again, as in all facets of light infantry operations, resourcefulness and innovation are fundamental in the conduct of C&E mission support.

Conclusions

I have attempted to give a brief overview of communications within the light infantry battalion. The same aspects of light infantry operations which set them apart from conventional operations (small unit tactics, stealth, "lightness," and innovation) provide numerous challenges to the light infantry communicator. As is always the case, he must be both technically and tactically proficient, a warrior, and a technician. However, in the light infantry battalion, his ability to provide communications is also directly related to his ability to do more with less. The communicators at every level in the 7th Infantry Division (Light) are meeting these challenges head-on and succeeding in providing support to the Army's first combat ready light infantry division.

Capt. Yochim is a 1980 ROTC graduate from the University of Hawaii with a BA in Political Science. His previous assignments in Germany have been as an operations/supply officer, battalion S-1, and HHD commander, 73rd Signal Battalion. He is an SOBC, SOAC, and CESOC graduate and is currently CESO, 2nd Battalion, 9th Infantry Regiment, 7th Infantry Division (Light), Fort Ord, California.