LIGHT INFANTRY BATTALION NIGHT ATTACK:
COMMAND AND CONTROL SYSTEM, STRENGTHS AND WEAKNESSES

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APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED
This monograph addresses the question: What are the strengths and weaknesses of the command and control system of light infantry battalion which is conducting a night attack?

To address this question, this monograph uses the following methodology. First, it develops working definitions of command and control and command and control system. Next, it examines two examples of night attacks—one successful, the other unsuccessful—to determine the command and control factors that led to success in the first and failure in the second. Then, using the definition of the command and control system, it briefly describes the physical composition of this system for the light infantry battalion. Its next step is to assess the strengths and weaknesses of the physical components of the command and control system of the light infantry battalion in their ability to perform the command and control factors of the night attack. Using the results of this assessment, (Continued on the other side of this form)
it then draws conclusions and makes some recommendations on ways to improve the light infantry battalion command and control system when it conducts a night attack.

This monograph draws the following conclusions. First, the leadership of the light infantry battalion will be its greatest strength during the night attack. Second, the light infantry battalion has a significant night vision capability, a strength for the night attack, but it can be improved. Third, the battalion has sufficient FM radios on the TOE to conduct a night attack, but the lack of radios in the scout squads hinders their ability to pass reconnaissance information necessary for preparing for the attack. Fourth, the capability to establish a TAC CP during a night attack will provide flexible control during the conduct of the attack. Finally, the battalion can significantly strengthen its capability to successfully execute a night attack if it develops and documents procedures, SOPs and techniques for quickly preparing warning orders and operations orders, thus providing subordinate units additional time for reconnaissance and thorough planning.
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LIGHT INFANTRY BATTALION NIGHT ATTACK:
COMMAND AND CONTROL SYSTEM, STRENGTHS AND WEAKNESSES

I. Introduction.

One of the recent additions to the U.S. Army's force structure is the light infantry division. This division is strategically mobile and, as Major Ed Thurman has argued in a recent AMSP monograph, can be used on battlefields that range from low to high intensity. (1) He also argues that the best use of the light infantry division is one which is "offensive, mobile, and which makes the best use of its unique skills." (2)

Field Circular (FC) 7-13, the doctrinal manual for the light infantry battalion, discusses several tactical operations which meet the criteria that Major Thurman listed. These include the masked attack, the search and attack, the baited attack, the battalion ambush, and the expanding torrent attack. (3) Each of these operations focuses on the light infantry battalion's ability to operate with stealth, in close terrain, and under difficult environmental conditions. They stress fast, violent offensive action at the time and place of the light infantry battalion's choosing. They differ only in the techniques used to set the conditions for the attack, then carry it out. For the purposes of this monograph I shall focus only on the masked attack conducted at night, and for simplicity, I shall simply call it a night attack. There are other
conditions for conducting a masked attack such as conditions of limited visibility and difficult terrain. But again, I shall only focus on the "night attack".

I have chosen the night attack to study for two reasons. First, it is a very difficult operation to execute. As a recent edition of Army Trainer stated:

"A night attack is perhaps the most difficult offensive mission to execute successfully. Command and control is almost always degraded and everything takes longer and requires more coordination and planning". (4)

Second, the light infantry battalion is supposed to be very skillful in night operations. As FC 7-13 says, "Night operations are the forte of the light infantry". (5) Since the night attack is one of the most difficult operations and the light infantry battalion is supposed to be good at it, then the internal systems of the light infantry battalion should provide the maximum possible efficiency and effectiveness in conducting the night attack.

I have narrowed the scope of this monograph by limiting my study to only one of the systems of the light infantry battalion, the command and control system. I have focused on the command and control system because it is the system which permits coordination to achieve maximum relative synchronization of combat power effects on the battlefield at the decisive point, and provides unity of direction to the fight. As FC 101-55, the current doctrinal manual about corps and division command and control, says, "Without
effective command and control, the unit will fail to perform its mission".

The specific question which I shall examine is: What are the strengths and weaknesses of the command and control system of a light infantry battalion which is conducting a night attack? To answer this question I will use the following methodology. First, I will develop a working definition of command and control and the command and control system, examine two examples of night attacks and then derive the command and control factors that led to success in one example and failure in the other. Next, I will briefly describe the components of the light infantry battalion command and control system that I feel are germane to the night attack, then using the command and control factors derived from the historical examples, I will assess the components of the light infantry battalion command and control system relative to the night attack. I will then close by making some recommendations on areas that I believe will improve the light infantry battalion's command and control system when the battalion conducts a coordinated night attack.
II. Definitions of Command and Control and the Command and Control System.

As Major Stephen Punais points out in his study of the current Army command and control system, there are a number of existing definitions of command and control.(7) These range from definitions that discuss the legal authority of the commander to those that delve into the individual components of command and control.(8) Punais provides his own definition of command and control which he develops from a variety of sources. He defines it as

"The exercise of command, the means of planning engagements and battles. Its essence lies in applying leadership, the ability to make rapid concise assessments of the tactical situation, decision making and supervision of the actions resulting from these decisions. In practice it concerns the organization, procedures, and techniques which allow the commander to implement his will in pursuit of his assigned missions".(9)

In this definition I believe that Major Punais is actually combining the definition of command and control with the definition of the command and control system. I believe that his intent is to convey that command and control actually concerns the intangibles of leadership, human motivation, the bearing of responsibility, planning, decision making, and supervision. Using this intent for the purposes of this monograph, I have developed my own definition of command and control which is

"the responsibility to establish unity of command and to harmonize the efforts of subordinates, their systems, and support in order to achieve the mission of the unit".
Command and control is exercised through the command and control system, the physical means of implementing command and control. I shall define the command and control system to be "an organized assembly of personnel, equipment, communications, facilities, and procedures employed by a commander"(10) to exercise command and control.

Having defined what a command and control system is, the next question is what is its purpose? I believe that the purpose of the command and control system should be to facilitate command and control through the following objectives:

a. To improve the quality and speed of command decisions for force agility, coordination and synchronization of combat effects.

b. To increase the accuracy of and to reduce the time needed to transmit situational information, intelligence and command decisions to people who must be aware of them or implement them.

c. To improve and to facilitate supervising orders or making corrections or adjustments to these orders.

d. To provide feedback to reduce the risk of .

I will use the definition of command and control system in Sections IV and V to describe and to assess the command and control system of the light infantry battalion relative to the light attack.
III. Night Attack: Analysis, Evaluation, and Conclusion

By examining military history in a critical manner we should be able to deduce lessons that are applicable to today's Army. In this section I shall examine two similar attacks—one successful, and the other unsuccessful. I present what I believe to be the command and control factors that led to success in the first case and failure in the other. These factors will then serve as the basis against which to compare the command and control system of the 1941 infantry battalion.

1st Battalion, 415th Regiment, 104th Division at Merken

(Sketch Map at Appendix A)

In December 1944 the 104th Infantry Division, organized with three infantry regiments in its structure, was attacking toward the Poer River. By 9 December it was approaching the Poer with the 414th Regiment on the left and the 415th Regiment on the right. To set the conditions for further attacks toward the Poer, the 415th Regiment was ordered to seize the town of Merken.

Merken, the objective, was a small town comprised of about 100 stone and brick buildings. It was surrounded by open, rolling ground with German entrenchments located on the west side of the town. Prior to the arrival of the 104th Infantry Division, the 9th Infantry Division had occupied this zone and had reported a minefield located in
the vicinity of Merken on what was to be the right flank of
the 415th Regiment. However, reconnaissance patrols had
failed to locate this minefield. Merken was believed to be
occupied by a battalion of the German 3rd Parachute
Division. It was believed that this battalion was supported
by either tanks, self-propelled 88 MM guns, or both. (13)

The 415th Regiment designated its 1st Battalion to
seize Merken. This battalion was at full strength and had
been in reserve for several days. Because Merken was
surrounded by open ground, the battalion was ordered to use
a night attack to seize the objective. (14)

Prior to the attack, key personnel in the battalion
conducted a careful terrain study from the high ground in
the vicinity of Lucherberg. This vantage point provided
excellent observation into Merken. In addition to ground
reconnaissance, the planners for this night attack used
photo interpretation maps to gain more information about the
objective. (15)

Based upon the information derived from this
reconnaissance, the battalion commander decided to use a
reinforced platoon from A Company to seize Wiltenich,
located to the northeast of Merken, then to have the platoon
establish a roadblock to protect the rear of the main attack
on Merken. His intent was to have the main attack gain a
foothold in Merken during darkness, then to complete
securing it in daylight. To facilitate control of this
scheme of maneuver, he decided to attack in a column of companies with the order of march being B Company, battalion headquarters, C Company and the platoon from A Company.(16)

The battalion had a tremendous amount of artillery for this operation. It had the fires of four artillery battalions, the 415th Regimental Cannon Company, eight mortars, and a platoon of 155 MM self-propelled guns. It used these fires for two purposes during the attack. First, they were used to establish a fire lane of parallel barrages 400 yards to each side of the route of march. Concentrations were fired frequently on known enemy positions. Second, the artillery was used to maintain direction by firing white phosphorous rounds to mark the route of advance. Fires were frequent enough in this area so that the battalion commander did not feel that this artillery barrage would compromise his attack.(17)

The battalion crossed the line of departure (LD) at 0430 on 11 December. It attempted to lay wire as a means of communications; however, the wire teams could not keep up, so radio was used to control the attack.(18) The battalion quickly and accurately navigated from the LD to Merken. The platoon from A Company "dropped off" at Vilvenich and overran the German element that was holding the town. It swiftly captured "seventy-eight prisoners before they could reach their weapons".(19) As the remainder of the battalion approached Merken, the artillery was shifted to block-
avenues of enemy retreat. The battalion assaulted their objectives as planned and by the end of the day, the majority of Merken was seized. The following day, the remainder of Merken was secured.(20)

What were the results of this attack? It had crossed 3,200 yards of open ground and captured a well-fortified position. The battalion lost one killed-in-action (KIA), twenty-seven wounded-in-action (WIA) and two missing-in-action (MIA). The Germans lost four antitank guns, two self-propelled guns, and fifteen machineguns.(21)

47th Infantry Regiment, 9th Infantry Division in Tunisia
(Sketch Map at Appendix B)

On 28 March 1943 the 9th Infantry Division directed the 47th Infantry Regiment to attack and to seize Hill 369, the eastern extremity of a longer hill mass called Jebel el Kheroua. This attack was part of a division attack which had been directed by II Corps to fix and to distract enemy forces in zone, thus facilitating operations by the 8th Army.(22)

A strong enemy force opposed the regiment's attack. It consisted of Italian veterans of the Centauro Division and the 10th Motorcycle Battalion. The enemy had occupied defensive positions long enough to have blasted fighting positions into the solid rock on the objective.(23)
The regiment planned to attack with the 1st and 3rd Battalions on the left to seize Hill 369 directly and the 2nd Battalion on the right along Djebel el Lottouchi. (24)

Several factors mitigated against success before the attack was ever launched. First, even though the 9th Division had done very well in tactical operations up to this point, it had conducted very few night operations. Second, the maps that were used to plan the attack were incomplete for they failed to accurately show the extremely difficult nature of the terrain near the objective. (25) Third, only battalion commanders had time to conduct reconnaissance prior to the operation. Finally, prior to the start of the attack, the division modified the original plan, but the change was disseminated too late for all elements of the regiment to make appropriate adjustments. Despite these problems, it attacked at 0330 hrs. (26)

The 1st and 3rd Battalions, which were to advance directly to Hill 369, misidentified the Draa el Hamaa Ridge as being the ridge leading to their objective. As a result, they seized part of Hill 290 and none of Hill 369. The 2nd Battalion, which was to move along the Djebel el Lottouchi, was detected and pinned down by enemy fire. During the next 36 hours while it was out of communications with the regiment, this battalion lost as prisoners its battalion commander, S-2, communications officer, most of E Company, and some officers and men from both F and G Companies. The
remainder of 2nd Battalion eventually pulled back and regained contact with the regiment. (27)

The enemy positions were not captured until 7 April. During the eleven days of the battle, the 47th Infantry Regiment lost 733 casualties. Of these losses, 242 of them were as prisoners who were captured primarily at the beginning of the attack. The regiment finally captured Hill 369 primarily because the enemy withdrew due to events elsewhere. (28)

Three command and control factors stand out as the differences between success by 1st Battalion, 415th Infantry Regiment at Merken and failure by the 47th Infantry Regiment in Tunisia. These were reconnaissance, navigation, and control.

In order to establish a unity of command and harmony of effort, a commander must be able to make a quick, accurate assessment of the situation. One way to do this is by reconnaissance. Reconnaissance provides exact knowledge about the situation, which creates the ability to anticipate changes. This ability to anticipate helps to reduce chance and the fog of war.

At Merken, reconnaissance was a key aspect of preparation for this operation for it led directly to the creation of an effective plan to seize Merken. As Major Morris says in his study

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"The high ground around Lucherberg allowed excellent observation of the objective, and the delay incurred waiting for the capture of Pier gave the attacking force ample opportunity to conduct detailed reconnaissance which included aerial photographs. Based on these observations, the plan was to seize Vilvenich...then attack Merken from the flank down the Pier - Merken Road". (29)

Thus reconnaissance led to an accurate assessment of the terrain and enemy which led to the creation of what turned out to be a very simple and effective plan for accomplishing the mission.

In the example of the 47th Infantry Regiment, one sees the effects of hasty, limited reconnaissance. In this case, only battalion commanders were able to perform reconnaissance. It was very limited for they failed to appreciate the difficulty of navigating in the terrain over which the attack had to travel. Certainly, they did not know the size, strength or preparations of the enemy they were facing.

A second command and control factor necessary for success in a night attack was navigation--specifically, successfully moving from the LD to the objective. This was clearly evident in the example at Merken for the battalion navigated almost two miles and even had to make a change of direction in the process. Navigation was facilitated in this example by the firing of white phosphorous rounds along the route of march to mark the route that the battalion had to follow to the objective. The battalion had planned to
assist itself in maintaining direction all the way to its objective.

The example of the 47th Infantry Regiment shows what happens when a unit fails to plan for navigation during a night attack. In this example, two battalions turned down the wrong ridges and attacked what they thought to be the objective, but was not. As a result they attacked the wrong hill and failed even to take it because of "intense mortar and machinegun fire delivered by an unsurprised enemy...

The final command and control factor was control. In the night attack, the attacker must plan methods of control that will insure that his force maintains its unity of effort all the way to the objective. Furthermore, once he arrives at the objective, he must have the ability to employ his force as a coherent unit, thus harmonizing the effects of subordinate units, their weapons systems, and support. The methods used to maintain control must overcome or work through the friction, the accumulation of chance errors, unexpected difficulties and confusion that can occur on the battlefield.

Control was best exemplified by the 1st Battalion, 415th Infantry. It attacked in a column of companies. This formation simplified control because all that each unit in the column had to do was maintain contact with the unit in
its front. All of the 1st Battalion, 415th Infantry units hit the objective.

In the example of the 47th Infantry Regiment in Tunisia, one sees a definite loss of control. The regimental commander attempted to attack with regiments moving along different routes. The regiment lost control of its 2d Battalion for "They were detected about 0535 (while it was still dark), and pinned down by the enemy" (31) and for the next 36 hours it remained out of contact with the regimental headquarters.

This analysis has shown that there were at least three command and control factors which lead to success in a night attack. I shall now describe the physical components of the light infantry battalion command and control system, then use these command and control factors to assess these components.
IV. The Physical Composition of the Light Infantry Battalion Command and Control System.

a. Organization.

The light infantry battalion is organized into a battalion headquarters and headquarters company (HHC) and three rifle companies. The HHC has two parts: the battalion headquarters and the battalion headquarters company. The battalion headquarters contains the battalion commander, the executive officer and the coordinating staff, S-1 to S-4. Each of the coordinating staff have sufficient personnel to provided continuous operations. The headquarters company comprises the company headquarters, the scout platoon, the 81 MM mortar platoon, the antiarmor platoon, the support platoon, and the medical platoon. Each rifle company is organized into a company headquarters and three rifle platoons. Within the company headquarters is an antiarmor section.(32)

b. Personnel and Training.

In his White Paper that outlined the need and concept for the light infantry division, General Wickham made it clear that soldiers and leadership would be the strength of the light infantry. He said:

"Soldier power will make the light infantry division uniquely effective. Soldier power is developed through thorough, rigorous training, physical and mental toughness, excellence in basic infantry skills, and competent, resourceful leadership".(33)
This emphasis on leadership and training is evident when one studies the personnel component of the light infantry battalion command and control system.

When one examines the TOE for the light infantry battalion, one sees that 24 of 35 officer positions call for ranger qualified officers. Certainly, in practice, all of these slots may not be filled by ranger qualified officers, but the intent is to have a core of officers who have experience in small unit operations. The positions for the battalion commander, the company commanders, and all of the rifle, scout and antitank platoon leaders call for ranger qualified officers.(34)

In addition to ranger qualified officers, all of the company leaders in each light infantry battalion from company commander through team leaders attend the Light Leaders Course conducted by the Ranger Department at Fort Benning, GA. The purpose of this course is to increase the infantry skills of company leaders in the area of leadership, training instruction and tactical battle drill. The course is 28 days long, with part of the instruction conducted at night. This course is the foundation for training the trainers and for instilling the tactics and the abilities that soldiers need to become skilled, tough, aggressive and smart light infantrymen.(35)

Running in parallel with this course are courses such as the Light Fighters Course taught by the 7th Infantry
Division (Light) at Fort Ord, CA. This course is the medium by which the skills the leaders learned during the Light Fighters Course are taught to their soldiers. One may infer that these include the skills of night fighting. (36)

In keeping with the Chief of Staff's guidance for tough, realistic training, light infantry battalions are stressing night operations. For example, in the training guidance by 9th Regiment, 7th Infantry Division, battalions are instructed to emphasize and become proficient in night operations such as the night attack. (37) By higher headquarters emphasizing this operation in training, individuals, leaders and units will develop the skills necessary to be effective in night operations such as the night attack.

This emphasis upon tough training for the officers and men of the light infantry battalion leads one to believe that the following is not a casual statement:

"The light infantry soldier is the most powerful combat weapon on the modern battlefield. He is unique: not in what he does, but in how he does it. He fights at night, in rough terrain, in bad weather, and by stalking. Attacking at a time and place of his own choosing, using elusiveness, violent action and surprise, he maximizes his advantages. He survives by stealth and by being a master of fieldcraft and land navigation". (38)

c. Equipment.

The only item of non-communications or non-weapons equipment on the light infantry battalion TOE which I feel is pertinent to the command and control of the night attack
is the AN/PVS-2 night vision sight. By TOE there are 75 of these devices in the battalion. There are eight night vision devices in each rifle platoon with two per squad and two for the M-60 machineguns, and three in the scout platoon with one per squad.(39)

d. Communications.

The operational concept for the light infantry division notes that light infantry division command and control "depends heavily on radio communications. Cable and wire assets are austere...".(40) This statement is certainly borne out when one examines the communications equipment on the TOE. There are a total of 10 AN/VPC-47s, 2 AN/VRC-49s, 3 AN/VRC-46s, 60 AN/PRC-77s and 11 AN/GPC-150s in the battalion.(41) These provide FM radio communications down to platoon level, with exceptions being the 81 MM mortar squads, and battalion and company antiarmor platoon and sections, respectively. The scout platoon has radios only down to platoon level. There are no radios in the scout squads.(42)

e. Facilities.

I have defined facilities as the equipment available to establish the command posts of the light infantry battalion.

The TOE for the light infantry battalion provides equipment to establish a main command post (CP) and a Tactical CP (TAC CP). The main CP would consist of the S-3
section's vehicle. The battalion commander may also establish a TAC CP to control or influence a decisive point by taking selected staff such as the S-3, the S-2, or fire support officer and moving to some place on the battlefield away from the main CP.(43) The TAC CP may be a mounted one, which is established using the radios in the battalion commander's vehicle, or it may be dismounted using AN/PRC-77 radios.

f. Procedures.

The light infantry battalion uses the military decision making process to plan an operation such as the night attack.(44) This is not unique to this organization.

What will be special for this organization and the night attack are the standing operating procedures (SOPs) and special techniques that the battalion develops to facilitate rapid planning and execution for the night attack. As the members of the organization gain experience in night attacks, they will find techniques to rapidly produce and distribute warning and operations orders to subordinate elements, thus allowing them additional time for planning and preparation. This is speculation, and if it is done, the degree of implementation will vary from unit to unit.
V. Assessment of the Light Infantry Battalion Command and Control System's Strengths and Weaknesses in its Ability to Perform the Night Attack.

a. Organization.

Although uniquely equipped in the U.S. Army force structure to provide rapid strategic mobility, I see nothing unique in the organization of the light infantry battalion that will contribute to or detract from the efficient or effective working of the battalion's command and control system when it conducts a night attack. To me, organization is neutral in this assessment.

b. Personnel and Training.

In my opinion the personnel of the light infantry battalion, if they are adequately and properly trained, will be its greatest strength in conducting the night attack. With its ranger qualified officers, Light Leader trained NCO's, and Light Fighter qualified soldiers, the battalion will have people who are able to perform the reconnaissance of the route and of the enemy that are essential to the success of the night attack. These people will have the requisite skills to observe, synthesize, and report the critical information which will lead to the timely, accurate command decisions necessary for success in the night attack. This same training, plus emphasis on good night training in light units, will contribute to successful navigation to the night attack objective. Finally, with emphasis on night operations, maintaining control will be
enhanced because the leaders and soldiers are accustomed to moving and operating at night. Good night navigation and good control will minimize the command supervision necessary for the companies of the light infantry battalion to reach, seize and hold their objectives.

c. Equipment.

The only piece of equipment for use in the night attack, other than weapons or communications, is the AN/PVS-2 night sight device. This device enhances the unit’s ability to perform reconnaissance, navigating, and maintaining control and is certainly a strength of the light infantry battalion in preparing for the night attack. However, the AN/PVS-2 has limitations. First, it is subject to "washout" when exposed to light at night, that is, it becomes disfunctional when it gets exposed to a bright light. Second, I know from personal experience that the operator can observe with the AN/PVS-2 for only limited periods of time, then severe eye strain and fatigue set in. Third, this device is unable to "look" through smoke, which an enemy could use to block the observation of his positions.

There is another device which could complement the AN/PVS-2 and offset its limitations. The AN/TAS-7 hand held thermal viewer would improve the light infantry’s ability to perform the three command and control factors necessary for a successful night attack. This device can detect vehicle
targets out to 1000 M and personnel out to 400 M. It weighs 12 pounds for both the viewer and battery. It can be used in either day or night and can see through smoke. (45) With one of these devices available for each rifle platoon and each scout squad, the light infantry battalion would significantly increase its night vision capability.

d. Communications.

Communications are the conduit for the flow of orders and instructions before the battle and the control of forces once the battle begins. They are the means by which information flows into the decision making process and by which these decisions are transmitted for implementation. Good communications can be a means for accurate situation orientation and the synchronization of combat effects to achieve the desired results. Furthermore, they are a means for fighting friction, for with good communications a commander may give guidance and control to those elements which have been halted, slowed or misoriented because of the particular tactical situation. Given the importance of good communications, what can one say about the communications of the light infantry battalion during the night attack?

The light infantry battalion has FM radio to platoon level with a few exceptions where it goes to lower levels. In my opinion, this will be a strength of the battalion for conducting reconnaissance prior to the night attack and controlling the night attack once it begins.
During reconnaissance, this system of radios will facilitate the rapid horizontal and vertical transfer of information about the route and enemy that are critical for preparing for the attack. During the attack, the FM radio system can be used to control, react to, or take advantage of unexpected favorable or unfavorable chances, occurrences or opportunities that develop. The battalion can facilitate the rapid, efficient transfer of information via its FM radio nets by developing, training and enforcing radio operating procedures that stress short, clear and concise communications. By using these techniques for communications, the battalion will greatly improve the efficiency and effectiveness in its communications system for passing the critical information that is necessary for planning, conducting and controlling the night attack.

There is one element of the battalion where I believe it has a weakness in communications. This is in the lack of radios for the scout squads. The platoon leader has an AN/PRC-77 which he can operate on the battalion command net; however, the squads, the true eyes and ears of the battalion, have no means of reporting the results of their reconnaissance without returning back to friendly lines, being debriefed by the platoon leader, then having the platoon leader report this information to the battalion headquarters. If each scout squad had its own radio, it would be able to report directly to the platoon leader, who
in turn could report to the battalion. This would save time in passing information which could be valuable to other units in the battalion in their preparation for the night attack.

e. Facilities.

The battalion has the capability to establish a TAC CP in addition to its main CP. This is a strength of the battalion in maintaining control during the night attack. By using the TAC CP, the battalion commander can position himself at a critical point or with a key company to control the battle or influence the situation. When things go wrong during the night attack, at least he will be able to control what he perceives to be the most important unit.

Another option the light infantry battalion has in controlling the night attack is to take either the battalion S-3 or the battalion executive officer, give him the three AN/PRC-77s which the S-3 section has, and have him accompany a unit of the battalion during the night attack. By doing this, the battalion commander can have a "directed telescope" in another area of the battlefield, thus extending his ability to influence and control circumstances at the decisive point.

f. Procedures.

If the unit conducts frequent night attacks, it will develop SOPs and techniques to facilitate the rapid
analysis and production of warning orders and operations orders for the night attack. The rapid production and dissemination of orders will allow subordinates more time to conduct reconnaissance, do planning for navigation and control, and perform rehearsals which will facilitate control. If light infantry battalions do this, it will certainly facilitate their planning and conduct of night attacks and be a strength during the night attack. If a unit fails to do this, it will be a weakness.

My personal experience with the night attack, having made dozens of them as a lieutenant and captain, is that even given the best reconnaissance, navigation and control, some elements of the battalion will become separated or lost during the conduct of the attack. No particular person or unit is responsible for this "breakdown" in the unity of effort of the force. It is simply the result of the friction of war.

The way to solve this problem of friction in the night attack lies in the procedures of the light infantry battalion. Every person in the battalion must know the commander's intent, that is the desired end state of the attack, two levels up the chain-of-command for the operation. For example, platoon leaders must know the battalion commander's intent. Every soldier must know the platoon leader's intent. By this infusion of intent through the light infantry battalion before it makes the attack,
every unit and individual will remain focused on the objective. By training and practicing the clear expression and understanding of commander's intent at all levels of the light infantry battalion structure, the battalion will reduce this problem of friction during the attack.
VI. Conclusions.

a. The greatest strength of the light infantry battalion command and control system in the night attack will be its leadership provided by officers and NCOs accustomed to operating at night. These will be complemented by the light infantry soldiers who have been trained in night operations, specifically the night attack.

b. The light infantry battalion has a significant night vision capability, a strength for the night attack, but I believe that it could use additional night vision devices to improve its ability to perform reconnaissance, then to navigate and to control itself during the night attack. I believe that the addition of availability of the AN/TAS-7 hand held thermal viewer will further strengthen the light infantry battalion's capability to operate at night with minimum additional weight added to the load of the light infantry soldier.

c. The light infantry battalion now has sufficient FM radios on its TOE to conduct a night attack. The scouts need radios to squad level to facilitate passing of reconnaissance information upward through the chain-of-command to the battalion. The speedy receipt and processing of this reconnaissance information will facilitate planning and control by the battalion. In addition to the radio in each of the scout squads, this will require the addition of a radio telephone operator
(RTO) and a radio in the platoon headquarters. The time saved in passing reconnaissance information will offset the cost of the additional man and the equipment.

d. The light infantry battalion has sufficient equipment to operate a TAC CP and even a "directed telescope" if the commander desires. This is a strong point of the battalion command and control system. It will provide flexible control by the light infantry battalion commander during the night attack.

e. If the light infantry battalion develops and documents procedures, SOPs and techniques for quickly preparing warning orders, operations orders, and documents special techniques that it learns while preparing and conducting night attacks, these will greatly facilitate reconnaissance, navigation and control of the night attack. If the battalion fails to do this, it will miss an opportunity to provide additional planning, reconnaissance and rehearsal time to its companies.

One procedure the battalion should strive to integrate into its command and control system is the clear statement of commander's intent. This intent should be infused to the lowest level. This procedure will help soldiers and units of the battalion maintain unity of effort during the night attack, even when the friction of war strikes.
VII. **Recommendations.**

a. That the Army consider adopting the AN/TAS-7 handheld thermal viewer on the light infantry battalion TOE.

b. That the Army consider providing the light infantry battalion scout squads one AN/PRC-77 radio per squad and the platoon headquarters one additional AN/PRC-77 radio and RTO.
Sketch Map for 1st Battalion, 415th Infantry at Merken
Sketch Map for 47th Infantry Regiment in Tunisia
END NOTES


2. IBID. p. 39.


5. FC 7 - 13. p. 5.


8. IBID. pp. C1 - C3. In this appendix, Runals provides the definitions of C2 which he extracted from a number of publications.

9. IBID. p. 4.


13. IBID.

14. IBID.


17. Morris, p. 5 - 6.

18. IBID, p. 6.


20. IBID.


23. IBID.

24. IBID.


27. IBID.

28. IBID.

29. IBID, p. 5.

30. IBID, p. 10.

31. IBID. Also according to Dr. Michael J. King in *Rangers: Selected Combat Operations in World War II* (Leavenworth Paper No. 11, Fort Leavenworth, KS: CSI, June 1985), when he discusses Ranger Operations at Djebel an Ank
he says on p. 19, that at "0600, as first light brightened
the sky to the east...". Djebel an Ank was only about 5
miles from where this operation took place. This operation
occurred only 8 days later, so it was probably still dark at
0535.

32. Table of Organization and Equipment (TOE) 7 - 15 L.
33. Chief of Staff of the Army. White Paper 1984: Light
Infantry Divisions. 16 April 1984.
34. TOE 7 - 15 L.
35. Phillips, CPT William D. "The Light Leaders Course".
36. IBID.
37. Memorandum for Record. AFZW - BA. SUBJECT: Command
Guidance for the 9th Regiment for 3rd and 4th Qtr FY 86. 22
April 1986.
39. TOE 7 - 15 L.
40. U.S. Army Combined Arms Combat Developments Activity.
US Army Operational Concept: The Light Infantry Division.
41. TOE 7 - 15 L.
42. IBID.
44. IBID. p. 9.
45. U.S. Department of the Army Field Circular 90-1. Night
pp. B-18 - B-19
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