

All the members of a particular staff section should not ride in the same vehicle. They and their plans and graphics should be spread across the entire main CP to prevent the possibility of losing the section if one vehicle is lost or destroyed.

All personnel in the main CP must be briefed in detail on the move. If possible, strip maps should be issued, or at least each vehicle must have a map with the location of the next site marked on it.

The main CP must have standard reaction drills for actions on contact and should practice and refine those drills whenever possible. Such actions should

include enemy air, ground, artillery, and NBC attacks.

Most important, when it is the right time for the main CP to move, it should move. Many units at the NTC don't move their main CPs until their communications have failed or until most of the TF is some 20 kilometers to the front because the leaders in the CP hesitated to move for one reason or another.

Again, the rule for moving CPs at the NTC is that "he who hesitates loses communications, loses track of the battle, and contributes nothing to the outcome."

Moving a command post around a

battlefield requires the same level of planning and coordination as moving a maneuver company. Units must train their battle staffs and CP crews in the daily operations of a main CP and must develop standing operating procedures for moving their main CPs. The objective is to have a well-trained main CP that can move, communicate, and control.

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Moving in the Mountains

LIEUTENANT COLONEL WILLIAM M. MENNING

One of the key tasks for combat leaders is timing the movement of their maneuver elements so they will be in the right places at the right times. In normal infantry terrain, calculating approximate movement time is a reasonably straightforward procedure.

Thus, the time estimates required for a cross country movement from an assembly area to an objective rally point, and for the various elements to move from the rally point to their respective positions, do not normally demand an inordinate amount of planning and evaluation. Mountainous terrain, however, imposes its own rules.

One factor that is vital to success in mountain operations is the ability of leaders, from squad through battalion level, to calculate movement time accurately. In the mountains it is not enough to just look at a two-kilometer move and guess at the time needed.

The basics of calculating movement

time in mountainous terrain for an unopposed movement are simple:

- Horizontal movement takes 60 minutes for each four kilometers.
- A gain in altitude takes 60 minutes for each 300 meters.
- A loss of altitude takes 60 minutes for each 500 meters.

From the perspective of a soldier, this is one and one-half minutes per 100 meters in horizontal distance, one minute per five meters of elevation gain, or one minute per eight and one-third meters elevation loss.

A given segment of a route is calculated first for horizontal movement and then for vertical movement. For example, in Figure 1, the 2,000-meter horizontal move (30 minutes) with a 100-meter elevation gain (20 minutes) would require a total of 50 minutes.

Each elevation gain and loss is figured separately as shown in Figure 2:

The horizontal distance of 3,000 meters takes 45 minutes; the vertical distance of 100 meters takes 20 minutes; the vertical loss of 50 meters takes 10 minutes; and the final vertical gain of 75 meters takes 15 minutes. Adding the minutes, the climb would take 90 minutes.

The conditions for this rate of movement include a good trail, a 35-pound load, dry weather and terrain, properly conditioned soldiers, and good visibility. As conditions become more adverse, this calculation becomes less of a science and more of an art that must rely on experience and judgment. At the best, a skilled mountaineer may be able to make an accurate estimate.

In extremely mountainous terrain where a unit is traversing very steep hillsides, it may be necessary to prepare contour profiles to provide more precise ground distance calculations than is possible with simple map distances.

This will permit a small unit to navigate more accurately with a known distance for pace-count purposes, but this is not to be confused with the horizontal component for time planning. The factors for time planning remain the horizontal distance and the vertical distance combined. (It may also be necessary to conduct an advance ground reconnaissance.)

MOST ARDUOUS

The most arduous and time-consuming movement, for example, might be one through mountainous terrain characterized by dense evergreen thickets with deep loose snow in a blizzard at night with a 90-pound load and under threat of enemy observation, and conducted by frightened and unfit troops. Naturally, we all hope to avoid such a situation.

More favorable conditions, of course, permit faster movement. For example, a soldier with a very light load of 12 kilograms may be able to move at six kilometers per hour horizontally and 500 meters per hour in ascent.

This method of calculation cannot be applied to sections of terrain that may require technical climbing. In these circumstances, leaders must either consult a guide book (if the route is an established mountaineering route) or conduct a reconnaissance and prepare the route.

The mountainous terrain for which this sort of movement calculation is useful is certainly not limited to alpine zones, and it becomes more useful as the terrain becomes more three dimensional. A patrol leader can make good use of this in planning a route through terrain of the kind that can be found in the wooded Appalachians, in the hills of the Korean peninsula, or in southern Germany's rolling foothills.

At company or battalion level, this calculation is indispensable in operational and logistical planning where subelements are to be tasked with coordinated and mutually supporting movements of many kilometers. It is simple, and it works.

Company commanders and junior

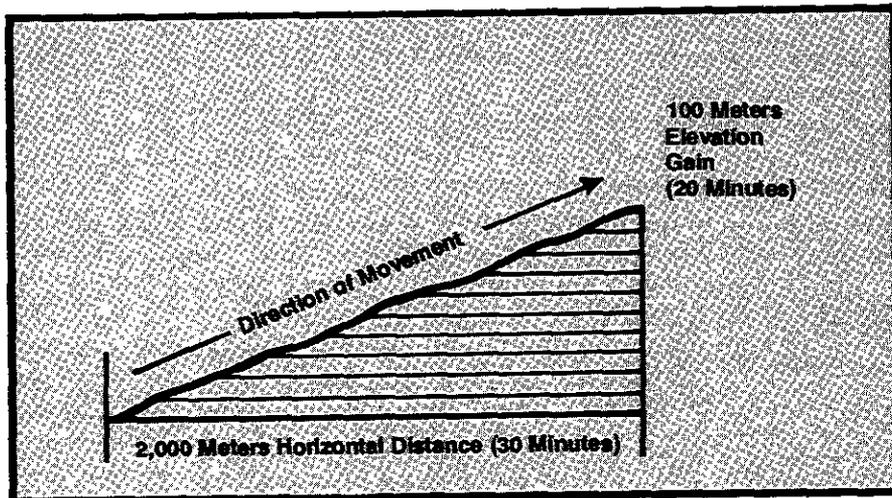


Figure 1

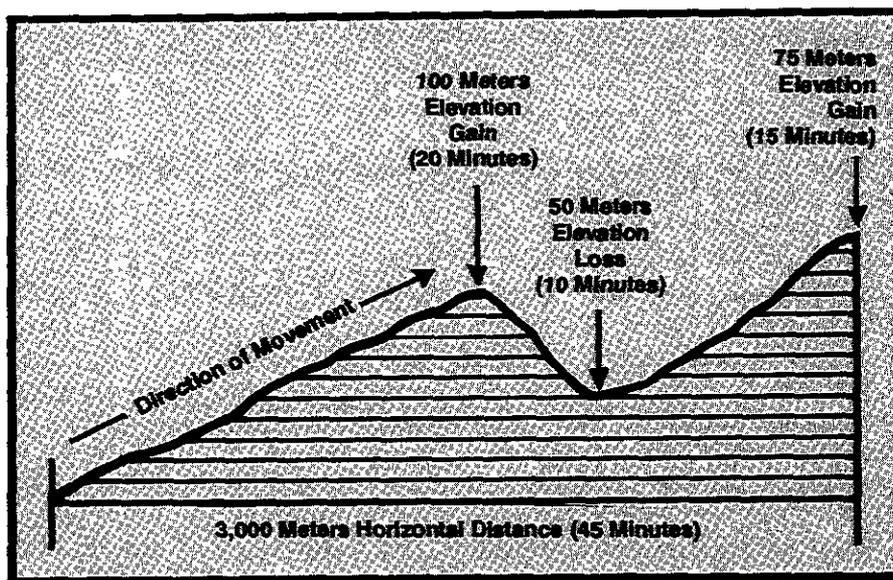


Figure 2

leaders especially must carefully determine the mission essential load for their soldiers. Subjectively, one meter of ascent is as fatiguing as four meters of lateral movement. This means that a soldier will notice any extra weight he may be carrying much sooner if he is conducting a mountain move, as opposed to a road march along a relatively flat route. The criteria for load planning are the same as in any other terrain, but soldiers pay a penalty much sooner for including non-critical weight.

Physical conditioning for soldiers operating in mountainous terrain is critical, and mental conditioning may also become a factor. Heavier soldiers, even if they are physically fit, will pay

the same penalty as if they were assigned heavy combat loads. The proper mental conditioning, especially if the route involves exposure to potentially significant falls around ledges or steep slopes, will do much to improve the individual soldier's ability. Training and experience in conducting mountain moves will help with both mental and physical conditioning.

Small unit leaders must see to it that their soldiers maintain contact with each other at all times. Breaks in contact under any circumstances may jeopardize a mission, but in the mountains, a break in contact may be disastrous, especially in foul weather or limited visibility. Under adverse conditions, the separated

personnel may quickly face life threatening situations. The best way to maintain contact is to conduct an advance reconnaissance and mark the route, follow established paths (if tactically feasible), maintain a steady pace, and take brief periodic rest halts during which leaders can check their

personnel.

Movement in mountainous terrain demands continuous training and proper conditioning, both mental and physical. And because that terrain imposes its own rules, Infantry leaders at all levels must study and understand them, and then must obey them.

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Platoon ARTEPs on the Run

LIEUTENANT COLONEL THOMAS R. ROZMAN

Seldom do actual events allow a unit to carry out its best-laid plans to the letter. Often, the plans that are most significantly affected are the ones that units live with most closely — their training plans.

In keeping with this observation, it is probably a rare battalion operations and training officer (S-3) who has not thought at least once, "Why bother planning? It'll all change tomorrow anyway." But, of course, the answer is always that some plan is better than none. At worst it provides a base point to adjust from. And as training resources to support plans become less and less forgiving, the importance of flexible planning will increase.

Here is an illustration of the way one unit — a mechanized battalion in a heavy brigade based in the continental United States — did plan flexibly, and successfully, for a significant training event. That event was platoon Army Training Evaluation Program (ARTEP) exercises, which are frequently a casualty of schedule changes. The ideas this battalion used may prove useful to other training planners.

The battalion S-3 had prepared a well-thought-out and systematic annual training plan that emphasized the battalion's mission essential task list (METL). The focal point of the

maneuver training program was the battalion's ARTEP.

To make sure the battalion was trained to standard on all individual, crew, and collective tasks, the S-3 had carefully planned to bring all maneuver and support platoons to ARTEP standards. His plan to do this provided each platoon with a scheduled ARTEP and the necessary resources from the battalion, brigade, and support elements. The plan scheduled the support platoons first, then the rifle platoons. Time was also allowed on the training calendar for company commanders to conduct their company level programs.

SCHEDULING PROBLEMS

Then the unforeseen occurred. Adjustments to a joint exercise schedule and subsequent changes in the units identified to participate would place the battalion at an Air Force base some distance away at the time it planned to conduct its rifle platoon ARTEPs. Worse, the planning, preparation, and post-operation time requirements for the exercise consumed more of the training calendar time. This loss of time before and after the exercise eliminated possibilities for rescheduling the rifle platoon ARTEPs to these time frames.

Other firm mission commitments precluded any shifting of the battalion's scheduled ARTEP.

The battalion commander appeared to be faced with deleting the rifle platoon ARTEPs from the battalion's pre-ARTEP training strategy. It seemed that the only possibility remaining was to make the most of the shortened company training periods and to determine what, if anything, could be done during the joint exercise to augment rifle platoon training. He believed it was particularly important to give his platoon leaders and their company commanders some uniform feedback on where they were in terms of training the platoons to standard (a proficiency to standard that was to be determined by observers from outside the company).

The battalion commander instructed the S-3 to examine all possible ways to salvage the platoon ARTEP program. The battalion S-3, in turn, gave the mission of analyzing the possibilities to his primary assistant, the operations and training officer for air operations (S-3 Air). Time being short, the battalion determined that it had three weeks to rework its plan; the S-3 Air made his report the next day.

Fortunately, he had been in his current position for more than eight