



Avenger and Stinger Problem Solving TTPs



Introduction

Tactics depend upon small-unit leaders who can carry out mission-type orders on a constantly changing battlefield. To do this, leaders must understand the situation, make a plan, and execute it. In order to quickly plan and carry out such tactics in a fluid environment, learning how to think is more vital than learning what to think. Doctrine is set by a higher command, but it requires judgment in its use. Doctrine is also used to refer to the whole body of officially approved tactics, techniques, and procedures. Tactics, techniques, and procedures must be defined and published in field manuals; leaders use them in different ways. The level of authority that establishes them, Detail in which they are written and The Degree to which they are standard is different at all levels. This article is designed to teach the doctrinal thought process at team level. However many teams will need help to full understand and interpret much of this article meaning. Platoon Leaders, platoon sergeants, section leaders need to read and teach the ideas list in this article. This article has consolidated the use of military acronyms and explains the proper use, order and meaning of them.

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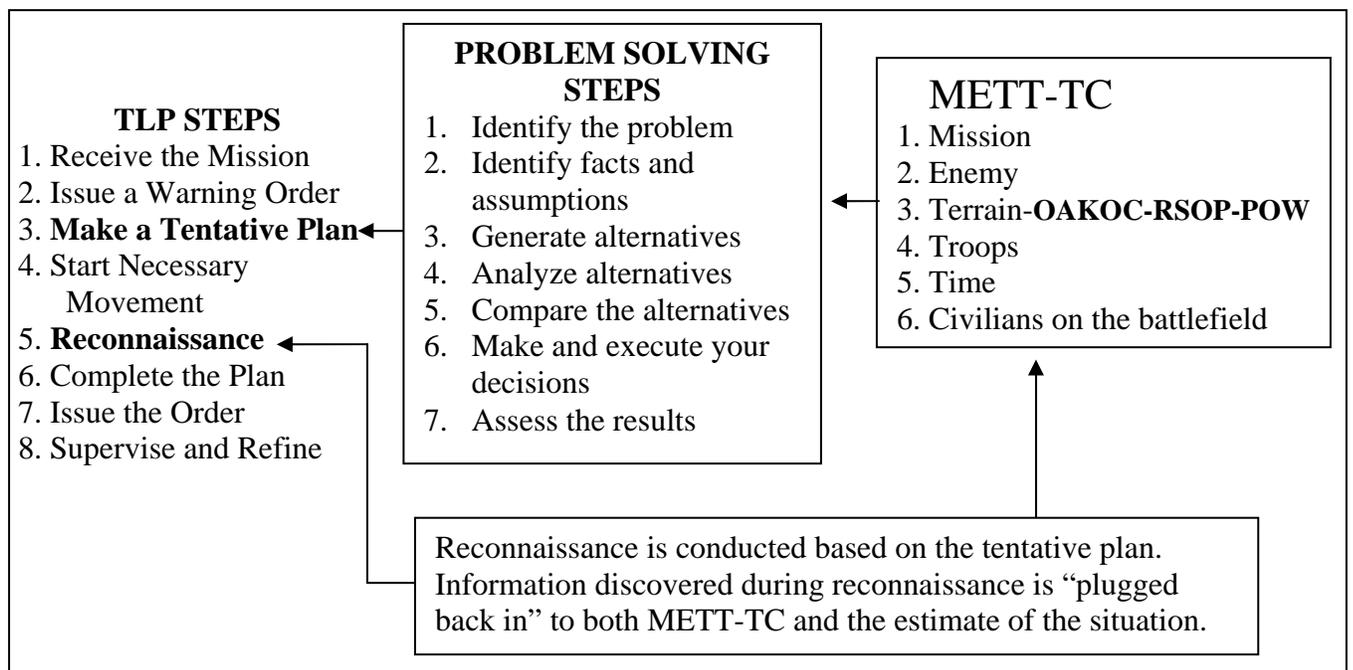
PROBLEM SOLVING

This section discusses tactical problem solving techniques. The order in which the steps taken are change according to the situation, they are not rigid. Some steps may be done at the same time, while others must be done over a period of time throughout the operation. A problem is an existing condition or situation in which what you want to happen is different from what actually is happening. Decision-making is the process that begins to change that situation. Thus, decision-makers know *whether* to decide, then *when* and *what* to decide. It includes understanding the consequences of your

decisions. Every once in a while, you may come across a decision that's easy to make: yes or no, right or left, on or off. As you gain experience as a leader, some of the decisions you find difficult now will become easier. But there will always be difficult decisions that require imagination, that require rigorous thinking and analysis, or that require you to factor in your gut reaction. Those are the tough decisions, the ones you're getting paid to make. The Troop leading procedures (TLPs) will help in organize your thoughts, especially time and the execution of your mission. See figure1-1.

TROOP LEADING PROCEDURES

Army leaders usually follow one of two decision-making processes. Leaders at company level and below follow the troop leading procedures (TLP). The TLP are designed to solving tactical problems. Leaders at battalion level and above follow the military decision making process (MDMP). The MDMP, which [FM 101-5](#) discusses, is designed for organizations with staffs. These established and proven methodologies combine elements of the planning operating action to save time and achieve parallel decision making and planning. Both follow the problem solving steps discussed in [FM 22-100 page 5-3](#).



STEP 1. Receive the Mission

Team leader may receive a mission in either a verbally or as a written operation order (OPORD). Upon receipt of the order, the most critical resource is time (especially daylight hours) in which to prepare.

STEP 2. Issue a Warning Order.

After receiving the oral or written order from the platoon leader, the team leader Issues warning order to his gunner. He briefs the gunner on the new operation. The team leader makes sure that the gunner receives all necessary information to accomplish the mission. All soldiers do a better job if they know the situation and remain informed. The first element of the warning order is a discussion of the friendly and enemy situation as it affects the mission. The second part of the warning order is the mission statement. It clearly specifies who is doing what, when, where, and why.

STEP 3. Make a tentative plan.

To help analyze your mission use the problem solving steps below.

a. Identify the problem.

Don't be distracted by the symptoms of the problem; get at its root cause. There may be more than one thing contributing to a problem, and you may run into a case where there are many of contributing factors but no real "smoking gun." The issue you choose to address as the root cause becomes the mission (or restated mission for tactical problems). The mission must include a simple statement of who, what, when, where, and why. In addition, it should include your end state, how you want things to look when the mission is complete.

b. Identify facts and assumptions. Get whatever facts you can in the time you have. Facts are statements of what you know about the situation. Assumptions are statements of what you believe about the situation but don't have facts to support. Make only assumptions that are likely to be true and essential to generate alternatives. Some of the many sources of facts include regulations, policies, and doctrinal publications. Your organization's mission, goals, and objectives may also be a source. Assumptions can from personal experiences, members of the organization, subject matter experts, or written observations. Analyze the facts and assumptions you identify to determine the scope of the problem.

c. Generate alternatives. Alternatives are ways to solve the problem. Develop more than one possible alternative. Don't be satisfied with the first thing that comes into your mind. That's lazy thinking; the third or fourth or twentieth alternative you come up with might be the best one. If you have time and experienced subordinates, include them in this step.

d. Analyze the alternatives. Identify intended and unintended consequences, resource or other constraints, and the advantages and disadvantages of each alternative. Be sure to consider all your alternatives. Don't prejudice the situation by favoring anyone alternative over the others.

e. Compare the alternatives. Evaluate each alternative for its probability of success and its cost. Think past the immediate future. How will this decision change things tomorrow? Next week? Next year?

f. Make and execute your decision.

Prepare a leader's plan of action, if necessary, and put it in motion.

g. Assess the results. Check constantly to see how the execution of your plan of action is going. Keep track of what happens. Adjust your plan, if necessary. Learn from the experience so you'll be better equipped next time. Follow up on results and make further adjustments as required.

STEP 4. Start necessary movement

The team leader can issue movement order as part of the warning order, when applicable. This is a good technique to make use of available time. A reasonable guideline is to use no more than one third of the available time for planning and to leave two thirds for execution. This procedure is called the 1/3-2/3 rule. The 1/3-2/3 rule starts as soon as you receive the order! The team leader can have the gunner conduct pre-combat checks (PCC) if the team leader has other coordination to do.

STEP 5. Conduct the reconnaissance

In the defense the platoon leader, platoon sergeant, and section leaders will normally conduct the reconnaissance. In offense operations or when time does not allow, normally a map reconnaissance is conducted by the chain of command. This leaves reconnaissance to be conducted by the team leader, to confirm or deny higher headquarters assumption of a position. The Team Leader must consider the inherent risk when a map reconnaissance was conducted. Prior to the team moving, the team leader plans the intended route Identifies choke points along intended route, and clears the route with platoon CP. The team leader should check his map frequently to make sure he knows where the team is at all times. Halt vehicle 100-200m short of position (METT-TC Dependent). Team Leader conducts reconnaissance to ensure area is free of NBC contamination, mines and booby traps. Verify location with GPS.

STEP 6. Complete the plan

The team leader completes his plan based on the reconnaissance and any change in the situation. The team leader reviews his mission, as he received it from the his platoon leader, to ensure that is plan meets the requirements of the mission, and stays in the framework of the platoon leaders intent.

STEP 7. Issue the operation order

Platoon leaders and section leaders normally issue operation orders. The team leader insures his gunner understands the concept of operation and asks the gunner questions about the mission to make sure he understands.

STEP 8. Supervise

If the gunner was told to conduct PCC verify that the task were accomplished.

METT-TC

The team leader must be aware of the factors of METT-TC and how they apply at his level. The team leader may receive the mission either orally or in writing. Close attention must be paid to the details, which directly affect the team's mission. The team leader must have answers to questions if the mission is to be successful. If important information affecting the mission is vague, ask questions. The team chief should make a tentative plan for the operation of the team. To help answer your question and organize your thoughts use the factors of METT-TC.

MISSION

The mission is the task, together with the purpose, that clearly indicates the action to be taken and the reason. Therefore it is always the first factor. A thorough understanding of the mission provides the focus for planning, as well as decision-making during execution. What is the mission?

- Who is going where, who is doing what, when and why?
- Where is my position, PTL and left and right limits?
- For whom does the team provide AD?
- To whom does the team report?
- What are the unit's call sign and frequency?
- Where is the sensor located and what is it radio frequency?
- What is the communication schedule?
- What are the threats, air and ground?
- What is the WCS, ADW and state of readiness?
- Where does the team get resupply?
- What is the sign and countersign?
- What are the special instructions, if any?
- How will expended missiles be replaced?
- When and where will IFF interrogators be programmed?

ENEMY

Second factor to consider is the enemy, Divisional ADA teams maneuver with company or company teams, for this reason it puts teams in close proximity of the enemy. Teams must realize they are fighting with a combined arms team. A combined arms team is the application of several arms- such as infantry, armor, artillery and aviation. To position the team effectively you must consider the type of threat you will face during the mission. First look at how the enemy will affect your mission, and then look at how your mission will affect the enemy.

- Identification - who is he, size, and type of unit?
- Location - where is he and where is he going?
- Strength – his versus yours?
- Capabilities – attacking, defending and chemical use?
- Composition - type aircraft, infantry, armor, artillery?
- Possible courses of action
- Examine the enemy factors of METT-TC in relation to how they affect your mission. The team leader will find most of this information in paragraph 1a of your platoon leaders OPORD.

TERRAIN

Third factor is terrain and weather, their impact on observation will differ, but each must be considered as factors. An appreciation of terrain—the ability to analyze its impact on operations—is one of the most important skills a team leader can possess. The terrain has a direct impact on selecting positions, movement, and communications; effectiveness of weapons and other systems; and protective measures. Effective use of terrain diminishes the effects of enemy fires, increases the effects of friendly fires, and facilitates surprise and increases survivability. The effects of terrain on operations vary depending on whether a force is on the defense or the offense. Terrain is normally analyzed using the five military aspects of terrain, expressed in the acronym **OAKOC**: Observation and fields of fire, Avenues of approach, Key terrain, Obstacles, Cover and concealment. These will be discussed in greater detail during reconnaissance, selection and occupation of a position (RSOP).

- Where can I effectively observe and engage the enemy?
- Where are the covered and concealed routes?
- What are the obstacles and where are they?
- How can obstacles be overcome or bypassed?
- Where is the key terrain? How can I use it to support my mission?
- How fast can I move, and how much space does the terrain and other unit formations give me?
- Does the terrain afford helicopter-masking areas where our maneuver force armored vehicles can be ambushed?
- Will the weather be a factor?

TROOPS

Tasks, which must be accomplished versus the number of soldiers needed to accomplish them (Prioritize tasks). The teams Mental and physical condition, maintenance status, supply, and equipment must be considered. If the team is task-organized to a supported unit the team leader must understand the command and support relationship.

- Consider the team's current task organization and if any changes are planned.
- Understanding of the platoon current status
- The current locations of adjacent supported unit's locations.
- What are the conditions of the team and vehicle?
- What is the status of ammunition, fuel, and supplies?
- Sleep plan?

TIME

The time available to conduct the operations process varies with the size of the unit and its mission. Time available also depends on useful and usable time. For example, for some activities, hours of darkness would be useable time, while for others darkness would not be useful for action. The team leader must be aware of the amount of time it takes to plan, prepare, and execute operations. Have the

gunner prepare for movement when you are receiving the OPORD. Have the gunner use the unit TACSOP, for Pre-combat checks (PCC), and upon your return refine and supervise. The Team leader must also consider time with respect to the enemy. The time available is always related to the enemy's ability to execute operations.

- The time available for preparation and planning?
- How much time before the enemy arrives?
- How long will it take to prepare a position?
- How much time do I have for planning?
- How long will it take to reach my objectives?
- How long will it take to prepare my battle position?

CIVILIAN CONSIDERATIONS

Consideration for civilians is a key factor across the entire range of operations.

Attitudes and activities of the civilian population can influence the outcome of military operations and should not be taken lightly. Civil considerations are how the man-made infrastructure, civilian institutions, and attitudes and activities of the civilian leaders, populations, and organizations within an area of operations influence the conduct of military operations. They are a factor in all offensive, defensive, stability, and support operations. Because of the world's increasing urbanization, attitudes and activities of the civilian population in the AO influence the outcome of military operations. Civil considerations of the environment can either help or hinder friendly or enemy forces.

Reconnaissance, Selection and Occupation of a position (RSOP)

The analysis of terrain is conducted during the Reconnaissance, Selection and Occupation of a position (RSOP). To analyze the terrain during your RSOP use the acronym OAKOC. The RSOP is the process for emplacing weapons systems in combat. This section discusses how the RSOP, crew drills, and the Priorities of Work are performed together in a combat environment. The team leader must understand that there are three different tasks when conducting the team RSOP.

Reconnaissance

Area reconnaissance, this is where Teams conduct an area reconnaissance to gain knowledge of the terrain and the specified area in or around the position. After gaining the necessary information, the team will then select the best firing position within the area assigned by the platoon leader.

Selection

Selection is the next sequence that the team leader uses to analyze the military aspects of terrain with **OAKOC**. It is obstacles first, avenues of approach second, key terrain third, observation and fields of fire fourth, and cover and concealment last. This technique uses a logical approach in that obstacles depict to a team leader where his team cannot go. Avenues of approach show where his team can go.

Key terrain tells the team chief where the team should go. Observation and fields of fire tells a team what he can see and shoot from. Cover and concealment shows a team where he can't be seen, and where the team can engage the enemy. Upon selection of the position the team will occupy position.

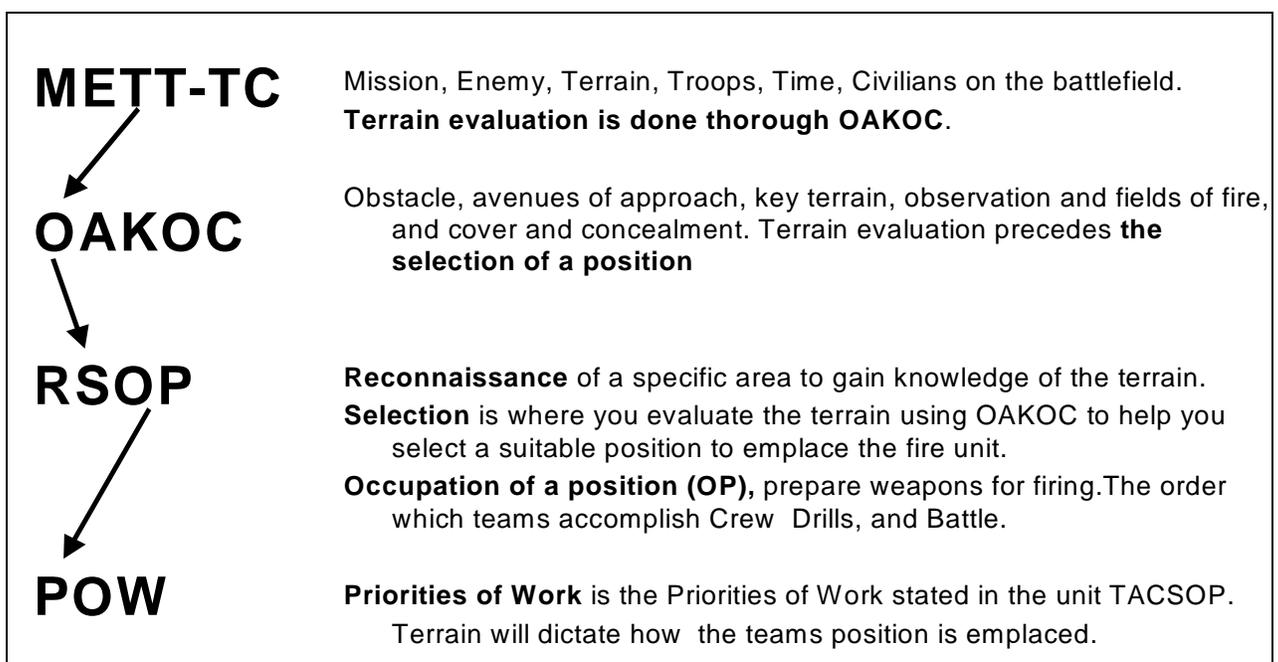
Occupation of a position

Upon occupation of a position the team prepares weapons for firing. Preparing weapons for firing is defined as, a crew drill. A crew drill is defined as a collective action performed by a crew of a weapon system. The ability to execute these drills correctly and in a timely manner will directly impact the survivability of that crew in combat. After the team conducts their emplacement (Crew) drill team leader will start Priorities of Work (POW) for position improvements. Priorities of Work are normally stated in the unit TACSOP; they define the priorities that have to be accomplished base on METT-TC.

Fundamental's of selection a firing position

Upon arrival of the team at the designated location, the team leader selects the best firing position within the area selected by the PLT leader. There are many **implied tasks** in the above statement that are critical to the team leaders mission. These are the fundamentals in the selection a position and the **though process** that leaders need to understand and apply at all levels.

- 1) The team leader understands the METT-TC process and incorporates in the selection process.
- 2) Terrain evaluation precedes the selection of a position and is a continuous process.
- 3) The implied task is that the team leader knows how to analyze the military aspects of terrain using the acronyms OAKOC.
- 4) The team leader understands how to properly conduct a reconnaissance, selection and occupation of a position (RSOP).
- 5) Position within or near friendly units for security and protection from enemy ground fires.
- 6) Masking the position from the enemy hides the position from the enemy.
- 7) Mission accomplishment is the prime consideration in site selection.



How to analyze the military aspects of Terrain through OAKOC

The nature of terrain over which military forces must operate will have a tremendous impact on what a unit can and cannot do. By carefully analyzing the terrain in advance, you can predict its effects on your combat operations. When you analyze terrain, you must consider the five primary characteristics or “aspects” that are important to terrain when planning or position during military operations. Before you analyze military aspects of terrain, you must first consider the mission of your unit, the composition of friendly forces involved and the weapons and equipment available. Then you must analyze the terrain from both your perspective and the enemy’s perspective. The acronym OAKOC should help you recall the five military aspects of terrain. You will study each of the aspects in turn.

Obstacles

An obstacle is any natural or man-made obstruction that canalizes, delays, impedes or stops military movement. An obstacle may be an advantage or disadvantage and must be considered on its own merits. The two types of obstacles are existing and reinforcing obstacles. Existing obstacles are natural or manmade that already inexistence on the battlefield prior to a unit’s arrival. Reinforcing obstacles, which complement existing obstacles, are constructed, emplaced or created by a unit. Below are Team tactical considerations for obstacles, but the list is not all-inclusive.

Tactical Considerations: Obstacles.

- Does the obstacle interfere with the line of site of my air avenue of approach?
- How will obstacles affect the team fields of fire (FOF) on my primary target line?
- If necessary, can the team move within the designated area and avoid the obstacle?
- How will enemy aircraft and ground forces use obstacles in or around the team’s position?
- Can the team use obstacles that are around their position as an advantage?
- How will obstacles and terrain affect team movement and/or maneuver?
- How will obstacles affect small arms fields of fire around my fighting position?
- Will these obstacles force the enemy into my engagement area?
- Where do I want to kill the enemy?
- How will the enemy detect and, if desired, bypass the obstacles

Avenues of approach.

An avenue of approach by definition is an air or ground route leading to an objective or key terrain. To be considered an avenue of approach, a route must be wide enough for the deployment of the force that will be using it. Upon the arrival of the team at the designated location the team leader must confirm if he can engage on the air avenues of approach identify by the platoon leader. The team leader also must identify the mounted, and dismounted avenues of approach within their area. After identifying avenues of approach, the team leader must evaluate each avenue. He determines the size and type of force that could use the avenue to attack his position.

Tactical Considerations: Avenues of approach.

- Do I have a clear line of sight of the air avenue of approach?
- Will this position maximize left and right limits?
- How will the enemy use each avenue of approach?
- What are the advantages and disadvantages of each avenue?
- Where will the enemy be canalized due to terrain constrictions?
- What are all likely enemy avenues to my position?
- Which ones could the enemy use to threaten my flanks?
- Base team positioning on threat analysis of primarily mounted or dismounted.
- What are the enemy's likely attack routes?
- How can I use each avenue of approach to support my movement and maneuver?
- How will each avenue support movement techniques, formations, and maneuver (once we make enemy contact)?

Key terrain.

Key terrain is any location or area of which the seizure, retention, or control affords a marked advantage to either combatant. **It is a conclusion rather than an observation:** key terrain may be controlled by physical occupation or by direct or indirect fire weapons to deny access. "Marked advantage" implies a locality or area of utmost importance. For example: A prominent hilltop overlooking several air avenues of approach that join together may prove to be key terrain. On the other hand, if the enemy's can easily bypass the same prominent hilltop on another avenue of approach; it may not be key terrain. The nontraditional aspect of terrain that must be addressed is communications coverage. The ability to operate using digitized systems and communications equipment. The decision to operate outside of communications coverage must be a deliberate decision of higher headquarters' and not random chance.

Tactical Considerations: Key terrain.

- Mission accomplishment is the prime consideration in site selection.
- The team chief must assess what terrain is key to his mission accomplishment.
- What terrain is key for friendly observation, command and control and for calling for fires?
- Where is the key terrain in or around the teams position, the location or area of which the seizure, retention, or control affords a marked advantage over the enemy?
- How do I gain or maintain control of key terrain in and around my position?
- What terrain is key for communications equipment?
- Recognize if you are positioned on key terrain, the enemy also knows it is key terrain and will target it.

Observation and Fields of Fire

Observation requires terrain that permits a force to locate the enemy, either visually or through surveillance devices. **Observation** is analyzed with weather (rain, fog and smoke) rather than terrain. **Fields of fire** for direct fire are primarily affected by terrain conditions between the weapon and target. The fire of indirect fire weapons (artillery rounds) is affected primarily by terrain conditions within the

target area. The team leader must identify locations along each avenue of approach that provide clear observation and fields of fire for both the attacker and the defender. Positions should be selected that provide all-around visibility and allows the weapon to be fired in any direction. This helps him to see the ground in a more objective manner and how it affects both enemy and friendly forces.

Tactical Considerations: Observation and Fields of Fire.

- Avenger / Stinger **are direct fire weapons**
- The best fields of fire are usually obtained from the military crest of a hill.
- The Position should ideally have at least 5 km of observation in the direction from which the attack is expected
- Positions should be selected that provide all-around visibility and allows weapons to be fired in any direction.
- What locations afford the clearest observation and fields of fire along both air / ground avenues of approach?
- Where are the air avenues of approach dead space in my sector?
- Consider observation and FOF for both air ground approaches to the position.
- Where are cover and concealment areas to your location, these are the enemy ground avenues of approach to your position.
- During reconnaissance select the dead spaces in and around fighting/firing position.
- Are there natural target reference points around the position?
- Where do I want to kill him? Can I observe and fire on that location?
- How obvious is the team position to the enemy?

Cover and Concealment:

Cover can be natural or man-made. Natural cover includes such things as logs, trees, stumps, and ravines. Manmade cover includes such things as fighting positions, trenches, walls, rubble, and craters. Look for and use every bit of cover the terrain offers. In combat, you need protection from enemy direct and indirect fire. Cover gives protection from bullets, fragments of exploding rounds, and biological and chemical agents. Cover can also conceal you from enemy observation. Concealment is anything that hides you from enemy observation. Concealment does not protect you from enemy fire. If the enemy can see you, he can hit you with his fire. Terrain features may provide cover and concealment. Masking behind the reverse slope may provide concealment. Cover may be provided by masking behind the reverse slope also, by reducing the effects of indirect fire because of the lack of enemy observation. . Because of the dust and smoke signature produced by the missile firing, the enemy can spot a firing position and attack it. The team chief looks at the terrain, foliage, structures, and other features in the area that offer cover (protection from fire) and concealment (protection from observation) Light discipline, noise discipline, and movement discipline, contribute to concealment. Light discipline is controlling the use of lights at night by such things as not smoking in the open, not walking around with a flashlight on, using filters on flashlights, and not using vehicle headlights. Noise discipline is taking action to deflect sounds generated by the team. Movement discipline is such things as not moving about fighting positions unless necessary, and not moving on routes that lack cover and concealment. Darkness cannot hide you from enemy observation in either offense or defense. The enemy's night vision devices and other detection means let them find you in both daylight and darkness.

Tactical Considerations: Cover and Concealment

- How can friendly and enemy forces use the available cover and concealment?
- What locations afford effective cover and concealment as well as clear fields of fire?
- Which terrain provides bounding elements with cover and concealment?

Occupation of a position

The occupation of a position is a crew drill that must train in. The primary task after selecting the best firing position within the area assigned by the platoon leader is to become operational as soon as possible. The **first priority** in occupying a position is preparing weapons for action. This is conducted through the use of crew or battle drills. Standardized drills are an essential element for the success of the Avenger and Stinger teams on the Air land battle. Drill training is an inseparable part of peacetime combat-oriented training which improves proficiency in mission oriented individual and collective tasks, maintains high combat readiness, and promotes cohesive teamwork. Team leader needs to understand why they conduct crew and battle drills and where they fit in the order of battle.

- **A crew drill** is a collective action performed by a crew of a weapons system or a piece of equipment must perform to use the weapon or equipment. Crew drills are Emplacement and Prepare for Action, Perform March Order.
- **Battle drills** are defined as standardized action made in response to common battlefield occurrences. The drills are initiated on a cue, such as an enemy action or simply a leader's order. Battle drills include target engagement procedures. Unit should reference the appropriate drill manual and incorporate in their unit TACSOPs.

Priorities of work

The team's priority of work is a list of tasks that the team leader uses to control what gets done and in what order. The exact position occupation sequence will vary according to the unit TACSOPs. The team leader adjusts the priorities of work based on his consideration of the factors of METT-TC and on his higher commanders intent. At the minimum all teams will conduct the following. Team will conduct an RSOP before position occupation. Conduct the crew or battle drill; establish physical security of the position, and verifying position with GPS. Establish communications with higher headquarters and verify early warning, and reporting the position ready for action. The unit will establish priorities of work check lists in their unit TACSOP. This is a procedural control measures that set standards and enforces good field discipline.

The following is an example of Priorities of work; when occupying position the team will go from a hasty to a deliberate unless otherwise directed from higher headquarters.

Position- Hour

- 1) Perform RSOP
- 2) Ready weapons for firing (this is a [Crew Drill 44-117-21 DRILL](#), emplace and prepare for action.).
- 3) Verify location, PTL, sectors of fire
- 4) Establish communication with higher
- 5) Reports grid. Verifies LADW warning.
- 6) Remote SHTU, and establish link-up
- 7) Make face to face with adjacent units.
- 8) Select alternate position
- 9) Begin range card.
- 10) Emplace M-8 alarm (150 Meters Remote)

P+1

- 11) Camouflage Vehicle.
- 12) Identify any dead spaces.
- 13) Dig hasty fighting position.
- 14) Emplace special equipment as necessary - claymores, concertina wire.
- 15) Items at position map, compass, binoculars unit TACSOP.

P+2 to P+7

- 16) Deliberate Positions firing position, and fighting position.
- 17) Range card, water, MRE, MOPP SUIT, M-8 Alarm
- 18) Complete Range Card.
- 19) Select Supplementary positions.

P+8 to P+23

- 20) Rehearse movement to alternate position.
- 21) Rehearse actions on enemy contact.

P + 24 and Beyond

- 22) Security, maintenance plan (PMCS), Establish sleep plan.
- 23) Constantly improve position.

Factors to Consider

All of this looks great on paper; and it's easy to talk about when things are calm, when there's plenty of time. But even when there isn't a great deal of time, you'll come up with the best solution if you follow this process to the extent that time allows. Even following these steps, you may find that with some decisions you need to take into account your knowledge, your intuition, and your best judgment. Intuition tells you what feels right; it comes from accumulated experience, often referred to as "gut feeling." However, don't be fooled into relying only on intuition, even if it has worked in the past. Use your experience, listen to your instincts, but do your research as well. Get the facts and generate alternatives. Analyze and compare as many as time allows. Then make your decision and act.