

Engagement Area Development

A Guide for Tank Platoon Leaders in Cavalry Squadrons

by First Lieutenant Brian L. Steed

Engagement area development and direct fire planning in the division cavalry squadron are remarkably different than in a regular task force. The distance over which the squadron defends, the critical mission tasks, and size of the enemy engaged are all reasons for the differences. As a result of these differences, the weight of direct fire planning falls primarily on the shoulders of the tank platoon leaders in the squadron, rather than the company/team commanders, as in the task force. The troop commander normally has responsibility for multiple engagement areas, in addition to coordination with air, indirect fires, engineers, etc. These tasks demand much of his attention and time, not allowing him to devote the necessary time to direct fire planning.

The tank platoon leaders must step forward and assume their roles as direct fire planners to reduce the burden on the troop commander and ensure a detailed product. Since most documents are written with the focus on the company/team commander, this recommendation becomes problematic. The purpose of this article is to provide a direct fire planning focus for the tank platoon leader developing a platoon engagement area (EA) which may then expand to the development of troop engagement areas.

In the cavalry environment, most engagement areas normally begin as a hasty occupation of a battle position. At the schoolhouse, we are taught that we sit in our tanks and use the radio to identify to our TCs the various target reference points (TRPs), sectors of fire, etc. We are even made to memorize a series of control measures to be identified. Instead, we need to look at how we occupy and develop a deliberate position to better understand the EA development process. The following will address the defense of a platoon battle position and the development of a platoon EA.

Receive the Mission

As soon as the platoon leader receives a warning order that hints at the de-

fense and where it will be conducted, he must conduct a quick map reconnaissance and evaluate the following items:

Task-Purpose: This is an entire issue unto itself, but is critical to the success of any mission. What are we doing, and why are we doing it are questions that the platoon leader must answer for all soldiers. The better we understand these answers, the easier it is for the leaders to retask themselves during a mission to accomplish their purpose.

Enemy Courses of Action (IPB): Absolutely critical to a platoon leader and most often ignored is the issue of IPB. The platoon leader must assess from his knowledge of the enemy, a probable enemy course of action. Is the enemy: an MRC, an MRB, etc.? What equipment does he have? How fast does/can he move? How does he employ and deploy his combat power? What combat support and combat service support does he have? What is his objective? Is he terrain- or force-oriented?

These and any other questions in regard to how the enemy has fought and will fight are essential for success. This is impossible for a platoon leader to do while perched in his tank. He must already know the answers to these ques-

tions; they must spring to his mind as he begins to run down the list.

Most Probable Enemy Course of Action: With a map reconnaissance and a detailed look at the probable enemy course of action, the platoon leader must look at the one course that he expects the enemy will take. Where does the enemy want to go?

EA Placement: Upon receipt of the overlay, the platoon leader must begin his map reconnaissance. He needs to analyze the terrain, identifying the intervisibility lines and testing the BP and EA positions. Do they make sense? A high level of detail here will improve the quality later.

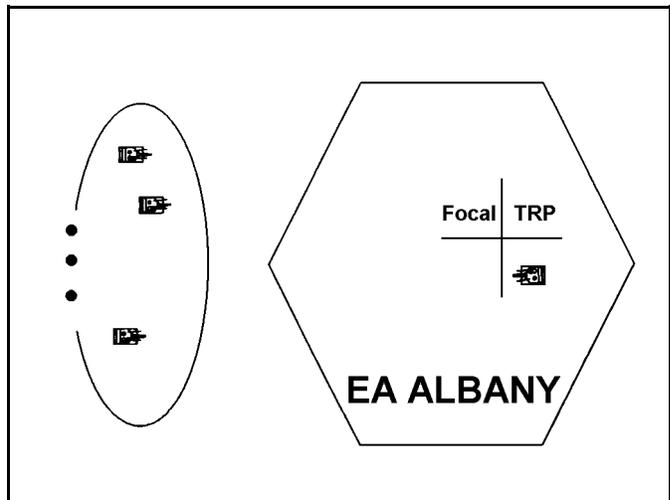
Engineer, Fire Support, and CSS Guidance: What sort of priority can you expect from the troop and squadron? Simply because the platoon or troop is low on the priority list should not stop the platoon leader from requesting additional assets. It never hurts to ask.

Security: All around security, all the time. Don't assume away enemy eyes.

Engagement Area Refinement

Now he must answer the question, where does the platoon want to kill the enemy? What this means to the platoon

Figure 1.
Focal TRP
Placement



leader is that he must physically go out into the proposed EA and mark the spot where he wants to kill the enemy (i.e., where he will mass 120-mm direct fires). The ideal would be for his crew to place a TRP at that spot while he looks back to the friendly side and identifies his platoon's positions (Figure 1). He should be on the radio communicating with his tank commanders back at the BP. If they plan to dig the vehicles in, then the TC should be laying on the ground with the binoculars at the proposed gun tube level and having the platoon leader's statements relayed by the loader in the hatch. The TCs will then reposition to allow them to engage the focal TRP. If the platoon leader has a GPS, then placing the focal TRP becomes more academic as he takes the grid of his proposed BP and programs it as a way point. Then as he moves forward into the EA he knows approximately how far it is and the focal TRP will be placed at a more accurate distance (e.g. 2400 meters).

The platoon leader should also place TRPs for trigger lines, break lines, and possibly for defining the EA itself. TCs should continue to track these additional TRPs and communicate whether or not they can observe them. Not only has the platoon leader defined the EA, but he has gone a long way in creating his direct fire plan.

Designate Weapons Positions

If the platoon leader follows the actions previously noted, most of his weapons positions are already designated. Often, however, the platoon leader will not have all the systems he will fight present when he plans and prepares the EA. Maybe he is designing a troop engagement area, or he expects several scout vehicles to support his platoon BP. These positions also require planning and proper marking. Planning each weapon's position requires the following considerations:

- **Tanks:** The M1A1 was designed for massed fires that destroy with unmitigated fury. Always mass tanks!
- **Bradleys:** They have two weapons systems, TOWs that can outrange your tanks, and a cannon that can provide final protective fire while you withdraw. Plan for both. The 25mm is a very destructive weapon when controlled by those who know how to use it, and our 19Ds know (Figure 2)!
- **Dismounts:** We don't usually get infantry support, but at times our

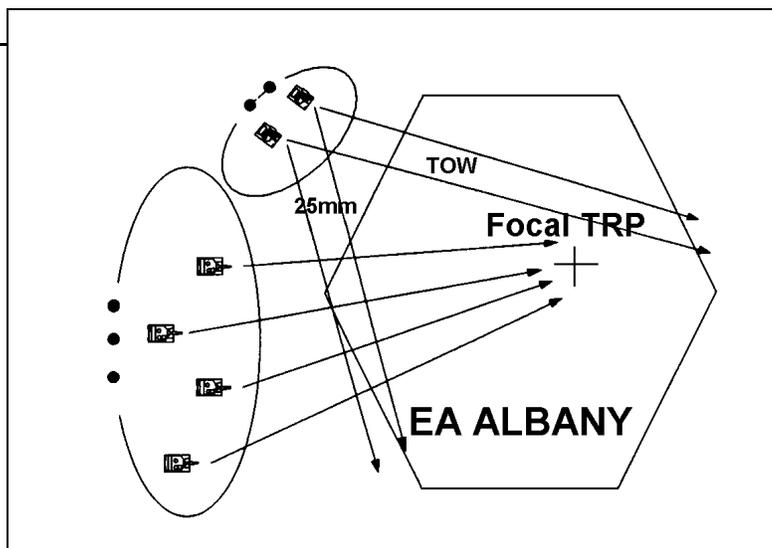


Figure 2. Planning for Weapons Positions

scouts will have dismounts. They are very useful in securing dismounted avenues of approach and killing light-skinned vehicles with their organic LAWs and/or DRAGONS. Infantry units usually bring DRAGONS and scouts have LAWs of one type or another. Dismounts are great when you can get them, but they must receive adequate support and require detailed planning.

- **Attack Helicopters:** One of the greatest benefits of being part of a division cavalry squadron is the maneuverability and speed that the air cav provides. Don't discount their firepower. At times, AH-1 Cobras will be available. The AH-1 Cobra has three different weapons systems. The TOW it carries is just as destructive as the Bradley TOW. It also has 2.75-inch rockets and 20mm, both of which can suppress BMPs and destroy light-skinned vehicles and troops. Always plan how you would use them. They are best on the flanks. Once this is done, request them. You will probably be the only tank platoon leader to plan for such assets and may receive a higher priority for your efforts. No promises.

Direct Fire Control Measures

The Armor School teaches that an EA is defined by trigger lines and break lines. This is correct, but oversimplified. The more detail the better. Here is an example of the needed level of detail:

A range of 3500 meters with two enemy vehicles across, represents the trigger for TOW firing.

- A range of 2900 meters with three enemy vehicles across, sends the signal to begin observed fire with one tank.
- A range of 2400 meters with five enemy vehicles across is the signal to the entire platoon to begin massed 120-mm fire.
- A range of 2000 meters with six enemy vehicles across signals displacement and the Bradleys to shift from TOW to 25mm for the final protective fires (FPF).
- Accompany every trigger line with a criteria, i.e. number of vehicles across. Items not discussed, but which should be, are how many rounds fired at each phase, what round is battlecarried, when to change battlecarry, etc.

Break lines and break criteria are also important. The division has only one division cavalry squadron. We are not expendable. Survival of our assets is critical to the continued success of the division and, therefore, must be preserved. Break lines and criteria are the commander's means of allowing units to survive. Take them seriously; plan, rehearse, and validate them. The intent is for a unit to be able to disengage and displace back to a subsequent position. If the line is too close, or the criteria either too heavy or light, then inform the commander. Always remember the intent is to survive, not to make a last stand.

Engineer Guidance

Firm control and specific guidance is critical to success with engineer assets. They need to be shown in graphic form

and engineer terminology what you require, where you want it, and when it needs to be completed. Engineers will do two things for tank platoon leaders in the defense. They will dig survivability positions, and they will emplace obstacles. First, remember that they will not always be available, so you must be prepared to plan and set obstacles from your platoon basic load. Even a few pickets and several rolls of wire can be significant across a high speed avenue.

Survivability: The standard is no wasted blade time. Timely and efficient action during the first portions of this process will improve the chances for success. Supervised marking of positions and having guides available the moment engineers arrive on station are critical. The platoon leader should meet the senior engineer and inform him of his plan, accepting recommendations from the engineer. Remember, he only recommends; you are in charge! Then lead him to the first position and ensure your TCs are prepared to show the ACE (or dozer) drivers what their digging focus (the center of the position's orientation) is and what the priority of the positions are.

Questions a tank platoon leader needs to consider:

- How much time will I have the engineer assets?
- How many blades do I have?
- How long does it take to dig a two-tier fighting position in this ground?
- How many holes can I get dug?
- Do I want hull-down positions instead? (Only when time is critically short.)
- Where is my priority?
- If I get blades longer, what more can I do with them? (Never leave engineer assets idle.)

Countermobility: Priority and purpose. Is the intent to turn, fix, disrupt, or block? These are questions and terms that engineers understand and can answer. Understand what the terms mean and what you want. Normally, at cavalry troop and platoon level, there will not be enough assets or time to emplace blocking or fixing obstacles.

Ensure you communicate priority of effort. You must take the senior engineer to each position and show him the extent of each obstacle if you want it done correctly. Additionally, you must inspect the obstacle preparation to ensure you are not surprised when the en-

emy attacks. Always consider limited visibility when planning obstacles; how do you cover them?

Fire Support Guidance

Just as with engineers, you must think in terms that the artillerymen understand: destroy, neutralize, and suppress. Each target needs to have a purpose. Why is it there? What do you want to do to the enemy with that target? Both you and the FIST must understand what you want to do and how you plan to do it in each EA. Always think of smoke. Direct support artillery battalions are hard to come by, but mortars are organic to your troop. Smoke can help in displacement. Also remember that obscuration, both smoke and dust caused by round impacts, work both ways. Plan for this obscuration; it will destroy laser efficiency. Mortars are also very useful for the FPF.

Don't just plot targets, but plan how to orchestrate indirect into the fire plan. Who is calling for fire in your platoon? Is it you, your platoon sergeant, a wingman maybe? What is their trigger for initiating these fires? Unlike direct fires, indirect fires are unresponsive and require even more thorough planning for success in a swirling tank fight.

Concepts to Consider

- Engagement criteria: Distance and number of vehicles across.
- Engagement priorities for each weapons system:
 - TOW and 120-mm SABOT should shoot tanks and ATGM systems.
 - 120-mm MPAT (HEAT) should focus on ADA, command and control vehicles, BMPs, and engineer assets.
 - 25mm and cal. .50 should focus on ADA, command and control vehicles, engineer assets, and BMPs.
 - Coax fires should focus on dismounts and trucks.
- CFV shift from TOW to 25mm: What enemy action triggers?
- Displacement criteria: Number of vehicles across a designated distance. Must be based on refinement through displacement rehearsal. We don't want vehicles caught in the open while they head for a subsequent position.
- Test EA on paper and on the ground: This will be discussed in the next section.
- Prepare:

- Positions
- Direct fire plan
- Obstacle plan
- Indirect fire plan
- Limited visibility plan. (This isn't simply for night operations. What about fog, dust, smoke, etc.? Our thermal sights and lasers are not invincible. What is the plan if lasers are ineffective?)
- Counterattack plan
- CSS plan (platoon leaders must always think of this, especially MIA1 platoon leaders).
- Rehearse: You will never do this enough!
 - Combined arms. Indirect fires, engineers, aviation (if available), and scouts.
 - Hatches open, open protected, closed, over pressurized.
 - Full-up, with CSS (transferring from semi-ready to ready rack, transferring from tank to tank, and from HEMTT to tank), and in MOPP 4.
 - Rehearse contingencies: What-if drills.
- Execute
 - Mass fires and maintain volume of fire.
 - Report accurately.
 - Be prepared to reposition and FRAGO off the plan. Flexibility of thought and action are the cavalry way of execution.
 - Consolidate and reorganize
 - Accurate, timely status reports.
 - CASEVAC on anything that is moving to the rear.
 - Maintenance forward.
 - Redistribute ammunition between ready racks and tanks. Restock if possible.
 - Fix obstacles.

EA Testing

Predict Enemy Formation - Is he on line or in column or somewhere between? Paint the picture so your gunners will know what the enemy will probably look like as they scan the battlefield (Figure 3).

Predict Enemy Speed - 20 kph is not always the right answer, even at NTC. If the enemy, in a former Warsaw Pact model, has a high speed avenue he will push it to the maximum. On the other hand, he may move much slower because of terrain constraints. This is why it is a must to physically drive the entire engagement area at the expected speeds. If an MIA1 tank can't go 20 kph then it is a safe bet that the enemy tanks can't either.

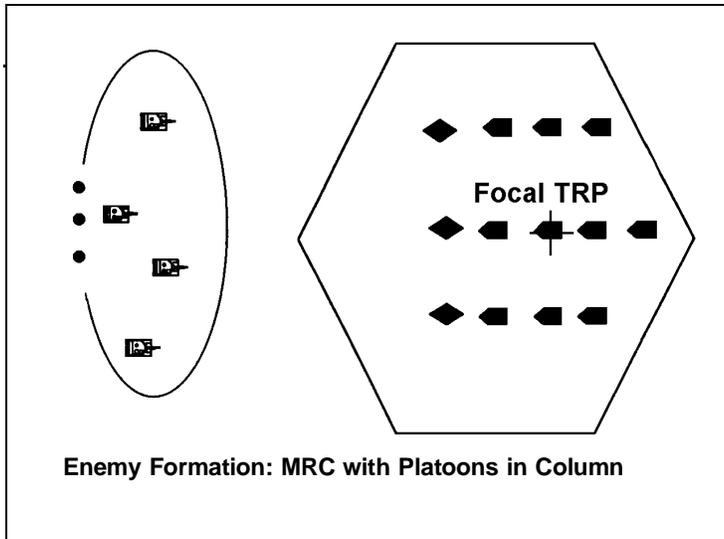


Figure 3. Enemy in the EA

Measure Engagement Area - How far back can the enemy be seen and engaged, and where does he reach the break line and criteria?

Determine Enemy Time in the Engagement Area - This starts with driving the engagement area and having TCs communicate at what point they lose you in their sights, and accurately recording the amount of dead space by both time and distance. This, subtracted from the enemy's speed through the engagement area, will tell the platoon leader how long he has to shoot the enemy.

Determine Type, Number of Enemy Vehicles in the Engagement Area - What kind, and how many, vehicles does the platoon have to kill?

Determine Time, Ammo Required to Kill - Will the platoon require more SABOT or MPAT (HEAT)? How long will be needed to kill the number of vehicles predicted? Can you get there from here, meaning, does the engagement area provide the time and space to kill all those vehicles?

Determine Number, Type of Friendly Vehicles Shooting into the EA - Are the right numbers of weapons systems arrayed? Does the platoon need Bradleys to help, or maybe the commander's tank?

Determine Friendly Obstacle Delay Time - The engineer representative can help with this question. Will the obstacles placed provide the time necessary to kill the enemy?

Compute the Number of Kills - (1) Direct Fire: This is the calculus part of the whole test. Assume an experienced gunner can identify, lay on, lose, and engage one target every 45 seconds. In the heat of a swirling tank fight, that is optimistic, especially once the enemy's direct and indirect fires are considered.

(2) Indirect Fires: Always assume zero. This applies to aviation kills as well. Direct fire must be able to destroy everything in the EA in your test or you are assuming away too many enemy capabilities.

Adjust Defense to Achieve Desired Number of Kills in Adequate Time Allowed!

Numbers to Remember

- The TOW 2 missile is about 75 percent effective at 3500 meters.
- A distinguished tank crew shoots about 35 percent at 3000 meters.
- A qualified tank crew shoots about 45 percent at 2400 meters.
- Most tanks fire ten rounds or less during the day live fire defense at NTC. This is against an entire MRR!
- Volume of fire equates to 20 rounds or more fired from a tank against an MRR. This means detailed planning of how a platoon rotates tanks back to transfer ammunition from semi-ready to ready rack.
- At NTC day and night live fire defense you will face 162 enemy vehicle targets. A "world class" task force kills 140 or more.

Final Note

Don't forget platoon fire commands. Think about them, and write them down before the battle so that there is a ready reference during the battle. This makes it much easier. The more thinking done prior to the fight, the easier it is to fight the fight.

Learn your doctrine, TTP, and gunnery manuals, but most of all, learn your platoon. Most direct fire planning can be SOP. You know your best shooters, those who can kill at long range, those who have a tight zero, etc. Use this knowledge to assist in your placement and calculations.

Always remember you are a cavalryman. This means that you must assume more responsibility and take more initiative. It doesn't mean that you treat defensive preparations in a cavalier manner. The scouts are the artists, you are the technicians, the military scientists in the squadron. Take this seriously in your planning and preparation and your four tanks will be able to destroy entire battalions. You are the real firepower, but you must be used effectively and efficiently.

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