Army Science Board: Maneuver Art versus FA Science

The article in the June edition, "Army Science Board: How Much Artillery is Enough?" [by John J. Todd and Lieutenant Colonel James M. Holt] discusses a recent study that looked at the age-old question of how much artillery we need. It provided a credible argument for something artillerymen have always known—that is, you can never have enough artillery, or put another way, more is always better than less. The importance of this study is evident by the fact that it justifies the increase in the allocation rule to two FA brigades per division and that it was instrumental in preventing the inactivation of Reserve Component [RC] FA brigades.

While I applaud the overall results of the Board's effort, I find their premise comparing artillery as a single-function "science" to the multi-function "art" of maneuver disturbing. The study uses this premise as a basis for asserting that RC FA brigades could be mobilized faster than RC maneuver brigades, considering the science of GS [general support] RC artillery compared to the art of DS [direct support] FA associated with maneuver brigades.

This notion of technical versus tactical or the science of fire support versus the art of maneuver has evolved throughout this century. While as a premise it certainly has been valid, the times are changing and we should not try to perpetuate it. It only serves to cause divisiveness in the combined arms effort; hopefully, as an idea, its days are numbered.

The way the FA fights is changing. While fighting artillery will continue to be highly technical (as will air and ground maneuver), artillerymen will increasingly look toward automation to solve traditional technical problems, thereby permitting them to hone their skills as tacticians and practitioners of the operational art. A major objective of digitization is to keep all members of the combined arms team on a common scheme of battle.

The fact is, artillery is more mobile. The shoot-and-scoot tactics of MLRS [multiple-launch rocket system], Paladin and our future Crusader are decreasing the need for prepared position areas. The shift in thinking from providing fires in a supporting role to fighting with fires will have a major impact on all artillerymen—active and Reserve, general or direct support.

The bottom line is that artillerymen must be as tactically proficient as the rest of the combined arms team. Consider a MLRS section chief or a platoon leader in the Michigan National Guard. He must know more than how to punch buttons on his computers. Rather, he must have a sound understanding of his immediate tactical situation, fully understand the commander's intent for fires and be thoroughly knowledgeable of his contribution to the overall combat power.

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The Problem with the OPAREA

I'm concerned about our MLRS [multiple-launch rocket system] doctrine and terrain management. My experiences as a MLRS battalion commander, Div Arty XO [division artillery executive officer], Div Arty S3, and M109A2 battalion S3 have convinced me that our doctrinal dispersion, especially in MLRS and Paladin units, doesn't recognize the reality of dealing with a maneuver commander and S3 on a battlefield. There's not as much room out there as we want.

In the following paragraphs, I roughly analyze the MLRS problem. However, the issues discussed apply to cannon (in particular, Paladin) units as well, but to a lesser degree. I've spent a lot of time trying to find a piece of ground to sit on.

MLRS doctrine as published in *FM 6-60 Multiple Launch Rocket System (MLRS) Operations* provides one basic type of position employment for all tactical situations: that is the three-kilometer-by-three-kilometer operational area (OPAREA). While the OPAREA works well as a survivability technique, it's seriously flawed as a positioning system. It demands too much land, it virtually destroys a platoon's ability to defend itself and it hinders command and control. The OPAREA should be one of several position or maneuver techniques available for the MLRS commander.

The OPAREA demands too much land. Each platoon OPAREA requires nine grid squares (three kilometers by three kilometers) with nine firing points. Assuming only a separate battery is supporting a division, a maneuver brigade should expect from one to three platoons in its sector, depending on METT-T [mission, enemy, terrain, troops and time available]. This means from nine to 27 grid squares should be available for MLRS in the brigade's sector.

While someone might say we can coutilize ground, that's really only a dream. No one wants to be anywhere around us when we're firing. The threat of counterfire is perceived to be too great, and the flames and debris thrown around by the rocket backblast are obviously dangerous. SPLLs [self-propelled launcher-loaders] basically consume the OPAREA's nine grid squares with the nine firing points due to the surface danger area described in Appendix E of FM 6-60 (just under 400 meters to the front, rear and the flanks rearward). There's so little safe area left in a grid square that there's no way to manage the terrain so we can share it with a unit occupying mutually supporting positions.

For example, let's assume the brigade defensive sector is 15 kilometers wide. SPLLs firing rockets must occupy positions in the forward battalion sectors. The rear of the OPAREAs should be no more than 10 kilometers from the forward line of troops (FLOT) to ensure that about two-thirds of the rocket range is forward of the FLOT. The maneuver battalion sector available for use is 80 square kilometers (eight by 10). The brigade area available is 150 square kilometers (15 by 10).

The table clearly depicts the problem. Our OPAREA "prices us out of business." Maneuver commanders won't give

Maneuver Battalion (8 x 10 Kilometers)				Maneuver Brigade (15 x 10 Kilometers)		
MLRS Unit	Land (Sq Km)	MLRS (Sq Km)	MLRS Percent	Land (Sq Km)	MLRS (Sq Km)	MLRS Percent
Platoon	80	9	11.25%	150	9	6%
Battery	80	27	33.75%	150	27	18%
2 Batteries	80	54	67.50%	150	54	36%
Battalion	80	81	101.25%	150	81	54%

MLRS Doctrinal Terrain Requirements in Square Kilometers (Sq Km)

us the land our doctrine demands. We "make do" with what we receive.

My complaint is that MLRS doctrine, as printed in FM 6-60, provides a detailed description of only one option: the platoon OPAREA. Without a doubt, a situation might allow us to use the OPAREA. A brigade with only one platoon in its sector (the secondary effort in a standard two up, one back defensive position?) may be able to devote six percent of its ground to MLRS. A platoon that's firing ATACMS [Army tactical missile system] from deep in the division or corps rear (not depicted in the table) also may be able to get enough ground to use the OPAREA. Therefore, USAFAS [US Army Field Artillery School] should not kill the OPAREA concept. But other positioning options requiring less space should join it in FM 6-60.

Platoon dispersion in an OPAREA hinders its ability to defend itself. If there's not enough room for the OPAREA, then we need a tighter position requiring less space. The size of an OPAREA coupled with the number of personnel in the individual elements—three per SPLL, three per POC [platoon operations center] FDC [fire direction center] without headquarters personnel and two per ammunition HEMTT [heavy expanded-mobility tactical truck]—results in a platoon that can't defend itself effectively. The dispersion of these small elements precludes mutual support in the event of a ground attack.

If the lack of land calls for a contraction or elimination of the doctrinal OPAREA, perimeter defense is enhanced through reduced dispersion once the platoon elements are close enough to support one another. This really argues for a platoon position with a defined perimeter. By necessity, firing positions would have to be outside the perimeter so the platoon position wouldn't be within the surface danger area.

Dispersion in the nine grid squares inhibits command and control (C^2). Radio communication is required for the platoon leader, platoon sergeant and POC to maintain contact with subordinate elements. When radios fail due to maintenance problems, terrain or operator error, reestablishing C^2 may require personal visits. Delivering food, mail, etc. also may require such visits routinely. It shouldn't happen, but it's possible to lose a HEMTT, or even a SPLL, for hours in the fog in Germany when radio communication fails. That could mean a soldier's life in combat.

Although we must be careful not to prepare for the last war instead of the next, Desert Storm sheds some interesting light on the subject. Even in the great expanse of the Saudi Arabian and Iraqi desert, finding nine-plus square kilometers for MLRS units was difficult. Finding cannon battalion and battery positions that didn't interfere with maneuver operations was also a challenge. Coupling that with concern about maintaining C^2 over a long move while employing units that could defend themselves to some degree resulted in Field Artillery units (cannon and MLRS) occupying battery and battalion positions and formations. After-action reports and periodical articles are filled with example after example of these formations. Basically every soldier had at least a captain to lead him on the battlefield. Ensuring massed firepower available immediately upon request also led to large Field Artillery formations and positions.

Conclusion. These concerns over maintaining C^2 and providing for perimeter defense won't go away. They argue strongly for a position smaller than the OPAREA concept allows. Also, the nonlinear battlefield of the future demands 6400-mil self-protection. The OPAREA can't meet this need. A platoon (or larger) position with a defined perimeter would enhance C^2 and provide better unit defense.

FM 6-60 should include platoon, battery and battalion positions and formations. The doctrinal limitation of only using the OPAREA blinds us to problems MLRS leaders face in the field. We won't receive the amount of land we want. Our soldiers may die because they can't defend themselves. Except for special situations such as a raid, asking for maneuver help is pointless—infantrymen and tankers have full plates already.

We must expand our thinking and accept that we can't dictate all battlefield actions to revolve around counterfire survivability; too many other factors are at work. MLRS doctrine must expand to provide leaders the flexibility to meet the situations they'll face so we'll continue as the King of Battle.

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