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LONG-RANGE FIRES: COMMANDERS' OPTIONS

by

General Glenn K. Otis, USA (Ret.)

Combat operations that involve firing weapons at enemy targets encompass two broad categories of fires: (1) direct, line-of-sight; and (2) indirect or non-line-of-sight. Tanks, rifles, machine guns and anti-tank weapons, to name a few, are examples of direct fires. In general, they are aimed by human sighting. Sensors aim indirect or non-line-of-sight fires, and the human operators may never see the target. Artillery, rockets, some air defense weapons and stand-off aircraft, to name a few, are examples of indirect fires. To be successful in combat, achieve decisive results quickly and minimize friendly casualties, commanders at every level will employ both direct and indirect fire to achieve the desired payoff.

The concept of long-range fires applies to both direct and indirect weapons. For example, a tank's direct fire main gun may be used at very close range such as 100 meters. It may also be used at ranges out to 5,000 meters where a ten-power scope is needed to aid the eye in acquiring the target and aiming the gun. For a tank, shooting at targets beyond about 2,000 meters is considered "long-range." Similarly, the Army's Tactical Missile System (ATACMS) can engage targets beyond 100,000 meters, so its reference to short-and long-range takes on an even different meaning. Moreover, aircraft, both helicopters and fixed-wing, can perform air-to-ground firing roles at ranges that run the gamut from directly in front of friendly ground combat troops to literally hundreds of kilometers distant from them.

In all cases, the commander has available a flexible set of highly lethal weapons to orchestrate against an enemy that has little protection regardless of the distance from U.S. ground troops. Since many of these weapons are not affected by weather, nor night considerations, the enemy is almost always vulnerable to fires.

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There is another important aspect of the long-range/short-range weapons story. It is often the case that friendly forces are located at considerable distances from each other. For example:

A. U.S. Marines launch an amphibious assault on an enemy seaport area. The Army's airborne forces parachute into an airport to seize it for future use. The air-and seaports are separated by 50 to 60 kilometers (like BWI and Baltimore port). Mutual support is both desirable and necessary between these enclaves.

B. Enemy air defenses are particularly robust around an air base complex that the U.S. joint force commander wants to attack with precision-guided, air-delivered weapons. The enemy air base is located 250 kilometers from the nearest U.S. ground forces. Suppressing enemy air defenses by using both surface-to-surface fires (ATACMS) and air-to-surface fires (F-16, F-15 aircraft) is much more efficient than using one system alone and risks fewer pilots in high-cost aircraft.

The points here are twofold:

(1) Long-range fires should be orchestrated so that the strengths and vulnerabilities of individual delivery systems are optimized.

(2) While it may be true that a single capability might be able to get the job done, it is equally true that a commander benefits by having a choice of weapons, to include employing a combination of weapons to take advantage of the resulting synergy.

Long-range fires may be used to strike targets that are far away from the direct fire battle. Alternatively, they may be moved further away from the direct fire battle area as a means of protecting the weapons themselves. In either case, the payoff is high. Aircraft have the advantage of both striking distant targets and being far away from the direct fire battle. However, they have the disadvantage of relatively short availability times and of being significantly affected by weather. Ground weapons, artillery, and ATACMS for example, have less range but can be employed around the clock and are not seriously affected by weather.

As is consistently the case among weapons of war, the advantages of some types of weapons systems offset the disadvantages of the other and vice versa. Conclusion: The joint force commander can dominate the enemy, win more quickly and do so with minimum casualties if he can employ a mutually-supporting set of weapons that confront the enemy with fires from all quarters. This represents a desirable robustness.

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(General Otis is an AUSA Senior Fellow.)