

Interim Brigade Combat Team Indirect Distributive Fires Concept

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The expectation that the Interim Brigade Combat Team (IBCT) will fight in a non-linear environment has forced units to develop new tactics, techniques, and procedures (TTPs) to incorporate indirect fires to deliver rounds in a 360-degree zone. Traditionally, most infantry units have trained and fought in a linear environment where—in offensive operations—the mortar platoon has been located at a one-half to two-thirds distance behind friendly troops providing a single direction of fire (DOF) forward of friendly lines.

With the introduction of non-linear operations, a larger battalion area of responsibility (AOR), and the possible requirement to execute simultaneous missions, the 5th Battalion, 20th Infantry, has adopted the 360-degree distributive fires concept to employ its mortar assets in a responsive, accurate, and safe manner.

This concept is predicated on situation dependent tactics, in which the mortar platoon establishes a firing point in the center of the battalion AOR so it can provide indirect fires in any direction. This technique for employing indirect mortar fires allows the IBCT infantry companies and platoons to operate in a non-linear environment with maximum freedom of maneuver and with constant and responsive mortar support. In order to provide 360-degree support, new mortar TTPs were developed for occupying a firing position and for fire direction control (FDC) procedures. The following are excerpts from the battalion's mortar platoon's standing operating procedures (SOPs):

Occupation:

- The terrain must provide 360-degree mask and overhead clearance.
- The mortars are placed in a modified "Lazy W" configuration to increase the platoon's depth and limit overhead fire.
- Once the DOF to the priority target is determined, the number 2 gun is placed as the anchor (Figure 1). Number 1 gun is placed at a general direction of four o'clock and 70 meters behind number 2 gun. Number 3 gun is placed at a general direction of seven o'clock and 70 meters to the left and

behind number 2 gun. Number 4 gun is placed 150 meters to the left and on line with number 2 gun.

- The mortars are laid on the primary DOF with referred deflections of 2800 and 0700 mils. Both deflections have aiming stakes placed at 50 and 100 meters. The two sets of poles are positioned to prevent inadvertent sight blockage.

FDC Procedures:

- It should be noted that depending upon the array of the tubes, it is possible to fire above the heads of the gun teams (Figure 2), which is not permitted during training exercises because of safety concerns. The M16 plotting board allows the FDC to determine which guns will fire during the mission. The plotting board is set up with the base gun representing the pivot point. The other three guns are plotted as positioned on the ground. Any value can be assigned to the intermediate quadrants on the board.

• The 360-degree fire adjustments are conducted in accordance with Field Manual 23-91, *Mortar Gunnery*. During fire for effect (FFE), the FDC determines the firing element, the sheaf's width and attitude, and the bursting diameter.

- The sheaf's width is determined by multiplying the number of guns in the FFE by the bursting diameter of the weapon system. The sheaf's attitude is determined by finding the perpendicular azimuth to the direction of fire. The DOF is indexed on the plotting board outlining the perpendicular azimuth.

- FFE is computed by entering the

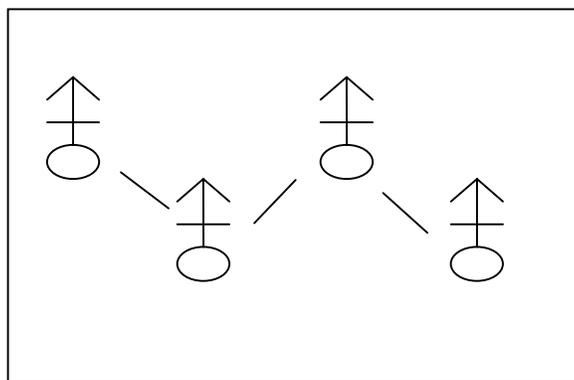


Figure 1

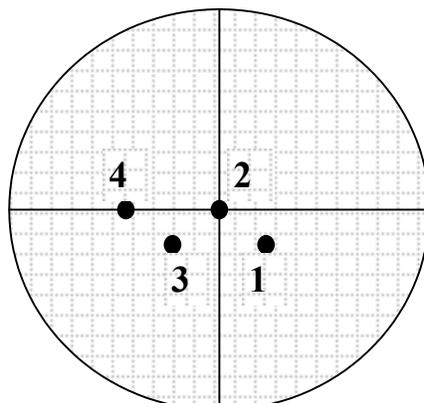


Figure 2

tactical firing control (TFC) switch on the M23 mortar ballistic computer. The sheaf is changed from PARALLEL to SPECIAL. The adjusting point is changed from FLANK to CENTER. This special sheaf arrangement (Figure 3) allows the rounds to impact *perpendicular* to the gun-target line. Without the special sheaf (Figure 4) targets to the DOF flanks would be engaged with a sheaf *parallel* to the gun-target line.

- The FDC uses two firing batteries in its set-up data to compute the call for fire. The mortar battery is entered in the computer twice, with a referred deflection of 0700 and 2800. The DOF determines which battery to employ in the call for fire.

- The initial fire command is tailored to explain which referred deflection to use in the fire mission and designated Safety T. The following is an example of the firing command:

Section Sergeant (SS): “Section, refer to your 0700 poles and red Safety T data.”

Squad leader (SL): “Refer to 0700 poles and red Safety T data.”

SS: “Section, deflection 1234, elevation 5678, at my command.”

SL: “Deflection 1234, elevation 5678, at your command.”

SS: “Section, hang it.”

SS: “Section, fire.”

The FDC and mortar gun crews modified standard methods of monitoring Safety Ts, registration data, and fire commands to the gun line. If there is not a contiguous 360-degree firing fan, each engagement area may have its own registration data, and *must* have its own Safety T. This data is color coded and placed on the mortar system. Once the FDC receives the fire mission, the FDC refers the gun squad leaders to the color code reflecting the respective Safety T for the fire mission.

The 360-degree distributive fires concept offers both advantages and challenges. Its primary strength is the mortar platoon’s ability to provide fires in any direction to any element. Some

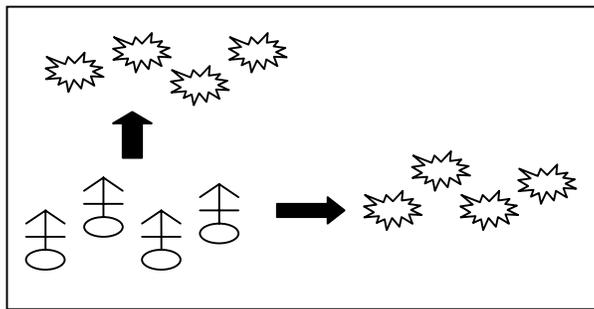


Figure 3

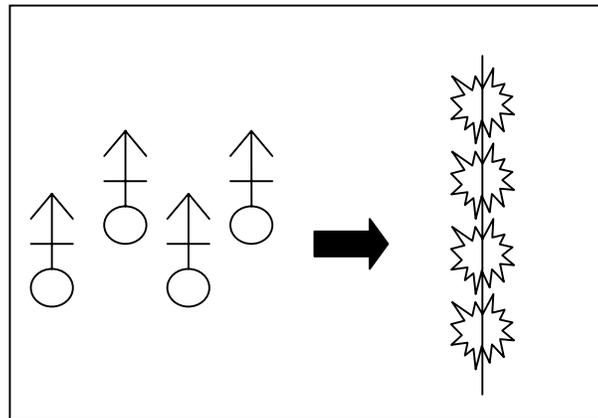


Figure 4

of the challenges lie in the ability to find a suitable firing point location that provides 360-degree mask, overhead clearance, cover, and concealment. The need to fire 360 degrees may also limit the use of camouflage nets.

The mortars have implemented numerous SOPs to increase their survivability. Manning the mortar tubes to provide responsive fires and to provide internal security for the mortar platoon continues to be a challenge. The mortars have conducted numerous break-contact live fire exercises to practice the task of completing a fire mission while engaged with an enemy element. To maintain proficiency in defending itself from ground attacks, the platoon integrates both blank and live fire break-contact drills into all mortar LFXs. The mortars rely on constant reconnaissance to locate and occupy new firing positions to avoid counter-battery fire.

The platoon conducted a series of training events to develop and refine the 360-degree concept. The platoon first developed the “Lazy W” formations, fire commands, and determined the referred deflection sight settings by con-

ducting numerous dry fire exercises. After practicing the concept in multiple FTXs, the platoon conducted several LFXs using short-range training rounds (SRTRs) to implement the theory and establish safety guidelines. The SRTR exercises were an efficient way to improve the sheaf and practice maneuvering the mortar tubes at multiple DOFs. The FDC conducted a weeklong battalion mortar certification conference with the company mortar sections to discuss and brainstorm firing techniques to improve the sheaf and fire mission time lapses. Finally, we integrated all of the developed TTPs into several LFXs.

The battalion mortar platoon and company mortar sections recently conducted a 360-degree LFX. The mortars established a firing point in the middle of the Fort Lewis impact area. Numerous forward observer (FO) teams were positioned in observation points surrounding the impact area. The FO teams called for fires that forced the mortar guns to use both referred deflections.

The 360-degree indirect fire concept provides responsive and accurate fires in any direction to any unit in a non-linear environment. The FDC and gun crews must continually practice the 360-degree TTPs and platoon SOPs to ensure that the fire missions are conducted precisely and safely. Leaders must be innovative during training events to practice the theory and integrate security measures to increase survivability. By constantly reviewing and improving training and techniques, mortar crews are ensuring that they can deliver timely accurate indirect fires the first time, every time.

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