

Company Fire Support Matrix— Getting it Right at the First Line of the Fight

by Sergeant First Class Sean E. Harris

Many company fire support officers (FSOs) don't know how to create the fire support products they need to convey the fire support plan to their units during rotations at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana. This results in forward observers (FOs), mortarmen and other company leaders not knowing what indirect fire support is available or how to employ what is available. Likewise, mortarmen don't know their part in the fire support plan. Finally, the lack of effective fire support products results in company leaders not knowing how indirect fires will support maneuver.

The fire support team (FIST) is responsible for fire support planning and coordination at the company level. In conjunction with his maneuver commander, the company FSO develops the fire support plan and briefs it to the platoon leaders and his FOs.

One technique that works well is for the FSO to communicate the fire support plan in three documents: the company fire support matrix (which includes a fire support execution matrix, or FSEM), company target list work sheet and company fire support overlay. From the fires paragraph and the fire support annex portions of the task force (battalion) operations order (OPORD), the FSO gathers much of the information he needs for his company products.

This article tells the company FSO how to develop a company fire support matrix and, briefly, what is included in the company target list work sheet and company target overlay.

Company Fire Support Matrix. *FM 6-20-20 Tactics, Techniques and Procedures for Fire Support at Battalion Task Force and Below*, which discusses the FSEM, implies the FSO must develop a matrix at the company level. The manual states, "the FSEM is a concise, easy planning tool that shows the many factors of a complicated fire support plan. Tactical SOPs [standing operating procedures] should standardize FSEM preparation to ensure synchronization with maneuver matrices." The FM implies that each fire support ele-



Photo by Raymond Bernard, JRTC

ment (FSE) must develop its own matrix and SOP explaining how to use the FSEM. Standardization throughout the FISTs that support a particular brigade is highly recommended.

The portions of the company fire support matrix discussed in this article as shown in the figure on Page 18 are the "Scheme of Fires" paragraph at the top, "Unit/Phase" (FSEM), "HPTs" (high-payoff targets), "Mortar Ammo," "CAS Info" (close air support), "Assets Available," "FSCM" (fire support coordination measures), "NSFS Info" (naval surface fire support), "Guidance for Special Munitions" and "Additional Instructions."

• *Scheme of Fires Paragraph.* The maneuver commander's idea of the part fires will play in his operation is called scheme of fires (or concept of fires at the brigade level). The scheme or concept of fires is a paragraph articulating

how the fire support battlefield operating system (BOS) is going to be employed in support of maneuver.

On the company fire support matrix in the figure, the scheme of fires paragraph is the same as the fires paragraph of the company OPORD. To develop that paragraph, the FSO and his company commander first must clearly understand the task force scheme of fires. Then using his commander's guidance, the company FSO develops the fires paragraph (scheme of fires). *FM 6-71 Tactics, Techniques and Procedures for Fire Support for the Combined Arms Commander* (Appendix I) suggests maneuver commanders express their guidance for fire support in terms of scheme/purpose, priority, allocation and restrictions (PPAR).

Of the four areas, scheme/purpose is the most important. "Scheme and/or purpose should address exactly what

Scheme of Fires: From LD/LC (PL Green) to PL Black (Phase II) 60-mm mortar will move w/2 Plt to and occupy PA #1. Mortars will assist in fixing (suppress) enemy dismounts. Use 81-mm mortars first. Firing 60-mm mortars may compromise their position. 105-mm howitzers will suppress squads and larger and neutralize the COPs. NGF and 155-mm howitzers will fire counterbattery/mortar missions. During this phase, POF will go the Plt in contact. Actions on the Objective (Phase III) (over)*

Unit Phase	DPICM	Movement to Obj	PL Black →	Obj	Counterattack	
FSO				Relay smoke CFF to 81s	% 81-mm FPF	5
1 Plt	1 81-mm Pri Tgt	Cancel & lay on Pri Tgts during movement			81-mm Plt FPF	4
2 Plt				Responsible for smoking the breach w/mortars		3
3 Plt		60-mm Pri Tgt		Engage dismounts outside Obj from SBF position	60-mm FPF	2
Mortar	Move w/2 Plt to PA #1; % provide immediate fires from current position	Occupy PA #1 O61398T; lay on Pri Tgts from 3 Plt AOF 3300/m		5 min smoke to 2 Plt; engage dismount outside Obj; Reserve 2 HE for FPF	Lay on the FPF from 3 Plt; % move to check point # 2 and link-up w/2 Plt	1
		<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	

HPTs	Action the FO should take upon identifying an HPT	Assets Available	Freq/Call-Sign	More Info:	
COPs	Initiate FFE mission on FDI net w/C Btry (ICM)	155 Plt	787 H98	Reinforcing	5
82 mortars	Assist in fixing w/Mortar report SALUTE	105-mm x 6 (A)	615 LØ7	FA POF to	4
Squad	FFE w/105s on FDI net w/C Btry	105-mm x 6 (C)	712 NØ7	TF Thunder	3
Dismounted Counter Atk	Engage dismounts w/mortars and 105s	81-mm x <u>4</u>	512 H12 H32	Operating split section	2
Mounted Counter Atk	Report location for CAS & 155s on Bn FS net	60-mm x <u>2</u>	45.20 Green 07		1
<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>

Mortar Ammo	HE	WP	Illum	CAS Info:
Section	18	6	0	2 A-10s on station H+45 — H+2
1 Plt	15	4		ETACs moving w/scouts
2 Plt	15	4		
3 Plt	15	4		
Cache	0	0		Submit CAS targets on the Bn FS net immediately
XO's truck	45	10	8	
Total	108	28	8	

FSCM	Location	Remarks	
NFA 1	Jeetertown	750-m radius	5
RFA	O64407	500-m radius No DPICM	4
RFL	N-S road on the Obj	Clear all fires across RFL w/B FSO. frequency 51.80	3
CFL	PL Purple		2
NFA 2	O69412	100-m radius	1
<i>k</i>	<i>l</i>	<i>m</i>	

Target Allocation: 1Plt 5 81-mm 2Plt 1 81-mm 3Plt 3 60-mm

Tgt Refinement Cutoff Time: 30 0700 Aug

FS Rehearsal Time & Loc: 29 1600 Aug Company CP

Action Upon Loss of FSO: 2 FO will move to CO CP ASAP

FSO Location During Battle: Moving w/Cdr

NSFS Info: 1 Spruance Class destroyer on station

at H-6. Request NGF on freq 41.95 Call-sign R45

FCTs will move w/B & C Companies

Guidance for Spec. Munitions: No illum S of PL Black

Bn mortars 9 minutes of smoke for breach

ADAM mine field planned S of the Obj; more to follow.

Additional Instructions:
Company Cdr will clear all fires
Plts must rehearse dropping off mortar ammo
Per Cdr's guidance, 2 Plt provides security squad to mortars
2 FO rehearse smoke CFF w/Plt Ldr & RTO
1 FO will operate on the Bn FS net
1 & 3 FO establish alternate for calling in FPFs
Confirm comms w/mortars & FA prior to leaving TAA
Report crossing all phase lines

*Scheme of Fires (the same as the fires paragraph of the company operations order) would continue on the back of the matrix.

Legend:**ADAM** = Air Denial Artillery Munition**Ammo** = Ammunition**AOF** = Azimuth of Fire**Atk** = Attack**Bn** = Battalion**CAS** = Close Air Support**Cdr** = Commander**CFF** = Call-for-Fire**CFL** = Coordinated Fire Line**CP** = Command Post**CO** = Commanding Officer**COPs** = Combat Observation Posts**DPICM** = Dual-Purpose Improved Conventional Munition**ETACs** = Enlisted Terminal Attack Controllers (USAF)**FA** = Field Artillery**FCTs** = Firepower Control Teams (USMC)**FD1** = Fire Direction Net 1**FFE** = Fire-for-Effect**FO** = Forward Observer**FPF** = Final Protective Fire**FS** = Fire Support**FSCM** = Fire Support Coordination Measures**FSO** = Fire Support Officer**HE** = High Explosive**HPTs** = High-Payoff Targets**ICM** = Improved Conventional Munitions**Illum** = Illumination**LD** = Line of Departure**Ldr** = Leader**LC** = Line of Contact**N** = North**NFA 1** = No Fire Area 1**NGF** = Naval Gunfire**NSFS** = Naval Surface Fire Support**O/O** = On-Order**Obj** = Objective**PA** = Position Area**PL** = Phase Line**Plt** = Platoon**POF** = Priority of Fire**Pri** = Priority**RFA** = Restricted Fire Area**RFL** = Restricted Fire Line**RTO** = Radio/Telephone Operator**S** = South**SALUTE** = Size, Activity, Location, Unit, Time and Equipment**SBF** = Support by Fire**TAA** = Tactical Assembly Area**TF** = Task Force**Tgt** = Target**w/** = With**WP** = White Phosphorous**XO** = Executive Officer

you [the commander] want fire support to accomplish during each phase of the battle. It should be specific in addressing attack guidance and engagement criteria" (Page I-1 of FM 6-71).

• *Unit/Phase.* Basically, the company fire support matrix is built around the FSEM. The FSEM communicates priority of fires (POF); final protective fires (FPFs); priority targets; and specific targets, groups and series. If the task force FSO has assigned planned targets to the company or the FSO plans to fire mortar targets to support the company scheme of fires, it's important the company FSO include these on the FSEM portion of the matrix. (See FM 6-20-20, Section 2-8 on Page 2-6 for more detailed information on the FSEM).

This portion of the company matrix lays down specifically what each element does to execute the plan during the various phases of the operation. For example, the instructions for the mortars should contain locations during particular phases, azimuth of fire (AOF) and the priority targets they will lay on. If the mortar section is moving with a specific platoon, it should be noted on the matrix at the appropriate phase—for example: "Moving with 2d Platoon."

• *High-Payoff Targets.* The HPTs are listed on the company fire support matrix with the actions expected when elements of the company identify or make contact with each HPT. For example, an action may be "Immediately initiate a fire mission on the FD1 [fire direction 1] net," or "Immediately notify the company FSO with a SALUTE [size, activity, location, unit, time and equipment] report and be prepared to call-for-fire."

FM 6-20-10 Tactics, Techniques and Procedures for the Targeting Process states, "the focus of the decide function

of the targeting process at the TF [task force] level is to give observers critical information. They must detect targets and pass target acquisition reports to attack systems so they can deliver effective, timely fires" (Page 5-1).

It's the task force FSO's responsibility to give this "critical information" for his observers, including not only his Army FOs and combat observation lasing teams (COLTs), but also his Marine Corps firepower control teams (FCTs) and Air Force enlisted terminal attack controllers (ETACs). The company FSO must ensure he gets this information from the task force FSO.

• *Mortar Ammo.* The mortar ammunition (ammo) portion of the matrix helps the company FSO with the difficult task of tracking mortar ammunition. Initially, the section tells each FO the number and type of rounds his platoon has been tasked to carry.

Each FO can help the FSO by tracking the mortar ammo in his platoon. For example, a platoon leader may decide to cache his mortar rounds. At that point, the platoon FO would notify the FSO of the cache with a grid location and the number and type of rounds cached. The FSO then would adjust his matrix and continue to track ammunition.

• *CAS Info.* This box on the matrix gives information about CAS. The number and type of sorties expected per day or the time when CAS is expected to be on station could be listed. Additionally, information concerning employing ETACs could be listed in this portion of the matrix. An example is "A Company, plan on employing an ETAC in your sector."

• *Assets Available.* All indirect fire support assets (other than CAS and NSFS) available to the brigade are listed

in this portion: general support (GS) and direct support (DS) artillery, attack helicopters (in the fire support role) and mortars. The company FSO gets this information from the task force fire support annex.

FOs usually know what assets are available, but they often don't know the assets' radio frequencies or call-signs. This is important information if communication with the company or task force FSO is lost.

• *FSCM.* Information pertaining to FSCM, such as type, location, effective date-time-group (DTG), radius, establishing headquarters and specific restrictions are listed in this part of the company fire support matrix.

• *NSFS Info.* This box contains information about naval gunfire (NGF) and its employment on the battlefield. It also may contain information about FCTs or ways to request NSFS in the absence of FCTs.

Examples include: "2 Spruance Class destroyers are GS to the brigade," or "Requests for NGF will be handled on the TF FS [fire support] net" or "A Company will have an FCT attached."

• *Guidance for Special Munitions.* Maneuver commanders are expected to give guidance on the use of special munitions (FM 6-71). The company FSO receives guidance on employing smoke, illumination, improved conventional munitions (ICM) or family of scatterable mines (FASCAM) from the task force fire support annex and his commander. An example of guidance from a higher headquarters could be: "Use of illumination must be approved by the brigade commander."

An example of a company commander's guidance for special munitions might be smoke to obscure a breach site.

The company FSO determines the number of minutes of obscurity needed and the asset to provide the coverage and writes on the matrix, for example, "Eight minutes of smoke will be provided by TF mortars at target AF2001."

• **Additional Instructions.** Instructions from higher headquarters and any instructions the company FSO has for his FOs are listed in this part of the matrix. For example, "Use a PLGR [precision lightweight global positioning system receiver] for all obstacles in your sector," or "1st Platoon, plan for one FA target."

• **Miscellaneous Information on the Matrix.** Unrelated but positioned below the FSCM portion is a series of fill-in the blanks comments built into the matrix. "Target Allocation": the FSO must inform his FOs if they are allocated targets for planning. Even if the task force hasn't allocated the company any planned targets, the company FSO still can allow the FOs to plan company mortar targets.

"Refinement Cutoff Time": if the task force FSO has established a deadline for target refinement, the company FSO must ensure his FOs send refinements to him in enough time to meet the task force's deadline.

"FS Rehearsal": This time must take into account platoon troop leading procedures to ensure maximum participation by the company's fire supporters. The FSO may prefer to execute the fire support rehearsal prior to the combined arms rehearsal to ensure the FOs are prepared to brief and execute at the task force/company rehearsal.

"Actions Upon Loss of FSO" and "FSO Location During Battle": If actions upon loss of the FSO (or fire support NCO) or the FSO's location during battle is standard, it can be written "as per SOP."

The numbers along the far right side of the matrix and the lower case, italicized

letters identifying sections of the matrix help the FSO update the plan with his FOs over the radio. The system allows the FSO to easily change, for example, the AOF in 1b from "3300" to "3200" or the grid in 4l from "064407" to "567345."

Company Target List Work Sheet. In addition to the company fire support matrix, the FSO produces a target list work sheet. It contains the planned targets from brigade and the task force and the targets the FSO has planned to support the company. The target list work sheet may be modified to include columns titled "Refined by," "Primary Shooter" and "Alternate Shooter." These columns help the FSO develop and refine his fire support plan.

If the FSO has specific targets he plans to fire during the execution portion of the mission, he includes these in his fire support briefing. He should identify where each target is, when it is to be fired, who initiates and fires (in the case of company mortars) the target and what the purpose for firing the target is.

Company Fire Support Overlay. The final product the company FSO produces is a fire support overlay. The overlay contains planned targets, FSCMs, unit positions and other related information. The amount of information on the overlay and its depiction should be standardized.

It's critical for FOs to have a fire support overlay because it's impossible to remember all the information an overlay can provide. Clear transparencies cut in half work well as overlays.

The fire support matrix described in this article is the primary tool for the FSO to communicate the company fire support plan. Each brigade must have a detailed SOP on how to fill out and use its company fire support matrix. Company FSOs must practice producing

clear, complete matrices and briefing them at home station.

One way to train company FSOs is to have the task force FSO produce a fire support annex and then act as the company commander, allowing his FSOs to practice developing and writing fire support plans. Also, during combined arms home station training, the task force FSO can review what the company FSOs produce and conduct after-action reviews (AARs).

FISTs must train continually to use the matrix. The FSO must ensure his company commander, platoon leaders and mortar section sergeants understand the matrix. In addition, every member of the platoon should be able to read it.

Units must be thoroughly trained on a standard company fire support matrix throughout the brigade before they come to the JRTC—or, more importantly, go into combat.



Sergeant First Class Sean E. Harris has been a **Company Fire Support NCO (FSNCO) Observer/Controller (O/C)** and now a **Battalion FSNCO O/C** at the **Joint Readiness Training Center (JRTC), Fort Polk, Louisiana**, for 14 brigade rotations. He also served in a number of positions with the **1st Battalion, 319th Airborne Field Artillery Regiment of the 82d Airborne Division, Fort Bragg, North Carolina**, including as a **Forward Observer and Company FSNCO** and, in the latter position, participated in **Operation Just Cause in Panama, Operations Desert Shield and Storm in the Persian Gulf** and two rotations at the JRTC. As a **Battalion Fire Support Sergeant** with the same battalion, he participated in a **division Battle Command Training Program (BCTP) Warfighter Exercise** and an additional rotation to the JRTC. Among other schools, **Sergeant First Class Harris** completed the **Naval Gunfire Spotter Course at Little Creek, Virginia**; and the **Joint Firepower Controllers Course at Hurlburt Field, Florida**.

Senior Fire Support Conference Dates

The dates for the next Senior Fire Support Conference at the Field Artillery School, Fort Sill, Oklahoma, have been set for 16 through 19 September 1997. The 97 Senior Fire Support Conference will focus on the theme "Training" as we proceed with Force XXI and the Army of the 21st century, to include fire support issues in doctrine, materiel development and joint operations.

Invitations to the conference will be sent to all Army corps and Marine Expeditionary Force (MEF) commanders, Reserve Component (RC) and Active Component (AC) Army and Marine division commanders; selected retired general officers; Training and Doctrine Command school commandants; AC and RC corps artillery and Field Artillery brigade, division artillery and Marine regimental

artillery commanders and their command sergeants major; and US Field Artillery Association corporate members. Corporate members and other companies also may have displays at the conference.

For more information, contact the G3, Training Command at Fort Sill: DSN 639-5460/4203 or commercial (405) 442-5460/4203. The Fax number is 7494 and works with both prefixes.