

## **APPENDIX G**

### **FRATRICIDE REDUCTION**

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Fratricide is as old as warfare itself, a complex problem that defies simple solutions. It is defined as “the employment of friendly weapons and munitions, with the intent to kill the enemy or destroy his equipment or facilities, that results in unforeseen and unintentional death or injury to friendly personnel.” This appendix focuses on actions leaders can take with current resources to reduce the risk of fratricide.

#### **MAGNITUDE OF THE PROBLEM**

The modern battlefield is more lethal than any in history. The pace of operations is rapid, and the nonlinear nature of the battlefield creates command and control challenges for all unit leaders.

Our ability to acquire targets using thermal imagery exceeds our ability to accurately identify targets as friend or foe. The accuracy and lethality of modern weapons make it possible to engage and destroy targets at these extended acquisition ranges.

Added to this is the problem of battlefield obscurity. Rain, dust, fog, smoke, and snow degrade the ability to identify targets by reducing the intensity and clarity of thermal images. The effects of battlefield obscurity must be considered when thermal identification is relied upon.

On the battlefield, positive visual identification cannot be the sole engagement criteria at ranges beyond 1,000 meters. Situational awareness is key and must be maintained throughout an operation.

#### **STOPPING A FRIENDLY FIRE INCIDENT**

The following are recommended actions to take at crew and leader level in the event the crew falls victim to friendly fires:

- React to contact until you recognize friendly fire.
- Cease fire.

- Report the following on the next higher unit net:
  - Announce that you are receiving friendly fire.
  - Give the location and direction of the firing vehicle.
  - Provide a visual recognition signal to cease fire.
  - Protect troops and request medical assistance as needed.
  - Warn the higher unit not to return fire if you identify the firing unit as friendly.

The following are recommended actions to take at crew and leader level when the crew has engaged friendly forces:

- Cease fire.
- Report the following on the next higher net:
  - Identification of the engaged friendly force (if unknown, report number and type of vehicles).
  - The location.
  - The direction and distance to victims.
  - The type of fire.
  - The target effects.

The following are recommended actions to take at crew and leader level in the event the crew observes a friendly fire incident:

- Seek cover and protect yourself.
- Report the following on the next higher net:
  - The engaged friendly force.
  - The location of the incident.

- The direction and distance to the victim and the firing unit.
- The type of fire.
- The target effects.
- Provide a visual friendly recognition signal.
- Provide assistance (when safe to do so) as needed.

In all situations involving the risk of fratricide and friendly fire, leaders must be prepared to take immediate actions to prevent casualties and equipment damage or destruction. Recommended actions include the following:

- Identify the incident and order the parties involved to cease fire.
- Conduct an in-stride risk assessment.
- Identify and implement controls to prevent the incident from recurring.

## **PREVENTATIVE MEASURES**

Reduction of fratricide risk begins with the planning phase of an operation and continues through the execution of the operation. The following are considerations for identify fratricide risks in the planning, preparation, and execution phases of a given operation:

- Planning phase. A plan that is thoroughly developed and understood helps to minimize fratricide risk. The following considerations help indicate the potential for fratricide in a given operation:
  - The clarity of the enemy situation.
  - The clarity of the friendly situation.
  - The clarity of the commander's intent.

- The complexity of the operation.
- The planning time available at each level.
- Preparation phase. The following factors may cause fratricide risks to become evident during rehearsals:
  - Number and type of rehearsals.
  - Training and proficiency levels of units and individuals.
  - The habitual relationships between units conducting the operation.
  - The endurance of the troops conducting the operation.
- Execution phase. During execution, in-stride risk assessment and reaction are necessary to overcome unforeseen fratricide risk situations. The following are factors to consider when assessing fratricide risks:
  - Intervisibility between adjacent units.
  - Amount of battlefield obscuration.
  - Ability or inability to positively identify targets.
  - Similarities and differences in equipment, vehicles, and uniforms among friendly and enemy forces.
  - Vehicle density on the battlefield.
  - The tempo of the battle.

Graphics are a basic tool that commanders at all levels use to clarify their intent, add precision to their concept, and communicate their plan to subordinates. As such, graphics can be a very useful tool in reducing the risk of fratricide. Commanders at all levels must understand the definitions and purpose of operational graphics and the techniques of their employment. See FM 101-5-1 for the definitions of each type of graphic control measure.

Briefbacks and rehearsals are primary tools in identifying and reducing fratricide risk. The following are some considerations in reducing fratricide:

- Briefbacks ensure subordinates understand the commander's intent. They often highlight areas of confusion, complexity, or planning errors.
- The type of rehearsal conducted determines what types of risks are identified.
- Rehearsals should extend to all levels of command and involve all key players.
- Use briefbacks or rehearsals to ensure subordinates know where fratricide risks exist and what to do to reduce or eliminate the risk.

Maintaining situational awareness at all levels is another key to fratricide reduction. Units must develop techniques and SOPs to gain and maintain situational awareness. Techniques could include—

- Eavesdropping on the next higher net.
- Radio cross-talk between units.
- Accurate position reporting and navigation.
- Training and use/exchange of LOs.

Risk assessment must be conducted at all levels during the planning, preparation, and execution phases of all operations. Identification of fratricide risk factors is conducted at every level, and the results should be clearly communicated up and down the chain of command.

Figure G-1, page G-6, provides a worksheet for considering fratricide risk in the context of mission requirements. The worksheet lists six mission-accomplishment factors that affect the risk of fratricide. Assess the potential risk in each area as low, medium, or high, and assign a point value to each (one point for low risk, two for medium risk, three for high risk). Add the point values for the overall fratricide assessment score. Use the resulting score only as a guide, however. Your final assessment must be based both on observable risk factors like those on the worksheet and on your "feel" for the intangible factors affecting the operation. Note that descriptive terms are listed only in the low- and high-risk columns of the worksheet. Your assessment of each factor will determine whether the risk matches one of these extremes or lies somewhere between them as a medium risk.

FACTORS	LOW (1)	MEDIUM (2)	HIGH (3)
<b>1. UNDERSTAND PLAN</b> - Commander's Intent - Complexity - Enemy Situation - Friendly Situation - ROE	Clear Simple Known Clear Clear	← - - - → ← - - - → ← - - - → ← - - - → ← - - - →	Foggy Complex Unknown Unclear Unclear
<b>2. ENVIRONMENT</b> - Intervisibility - Obscuration - Battle tempo - Positive target ID	Favorable Clear Slow 100%	← - - - → ← - - - → ← - - - → ← - - - →	Unfavorable Obscured Fast 0%
<b>3. CONTROL MEASURES</b> - Command relationships - Audio - Visual - Graphics - SOPs - LOs - Location/Navigation	Organic Loud/Clear Well Seen Standard Standard Proficient Sure	← - - - → ← - - - →	Joint/Combined Jammed Obscured Not understood Not used Untrained Unsure
<b>4. EQUIPMENT</b> (Compared to US) - Friendly - Enemy	Similar Different	← - - - → ← - - - →	Different Similar
<b>5. TRAINING</b> - Individual proficiency - Unit proficiency - Rehearsals - Habitual relationship - Endurance	MOS Qual Trained Multiple Yes Alert	← - - - → ← - - - → ← - - - → ← - - - → ← - - - →	Untrained Untrained None No Fatigued
<b>6. PLANNING TIME</b> (1/3 - 2/3 Rule) - Higher HQ - Own HQ - Lower HQ	Adequate Adequate Adequate	← - - - → ← - - - → ← - - - →	Inadequate Inadequate Inadequate
<b>OVERALL FRATRICIDE ASSESSMENT SCORE</b>	<b>LOW</b> 26-46*	<b>MEDIUM</b> 42-62*	<b>HIGH</b> 58-78*
* Commander may use numbers as the situation dictates. * Numbers alone may not give accurate fratricide risk.			

Figure G-1. Fratricide risk assessment worksheet.

## FRATRICIDE REDUCTION GUIDELINES

The following measures are provided as a guide to prudent and appropriate actions that can reduce fratricide risk. They are not directive in nature, nor are they intended to restrict initiative. Apply them as appropriate based on the specific situation and METT-T factors.

- Identify and assess potential fratricide risk in the estimate of the situation. Express this risk in the OPORD or FRAGO.
- Maintain situational awareness-current intelligence; unit locations/dispositions; denial areas (minefields/FASCAM); contaminated areas, such as ICM and NBC; SITREPs; and METT-T.
- Ensure positive target identification. Review vehicle/weapons identification (ID) cards. Know at what ranges and under what conditions positive ID of friendly vehicles/weapons is possible.
- Establish a command climate that stresses fratricide prevention. Enforce fratricide prevention measures; use doctrinally sound tactics, techniques, and procedures to ensure constant supervision of execution of orders and performance to standards.
- Recognize the signs of battlefield stress. Take quick, effective action to deal with it to maintain unit cohesion.
- Conduct individual and collective (unit) fratricide awareness training; target identification/recognition training; fire discipline; and leader training.
- Develop a simple, decisive plan.
- Give complete and concise mission orders.
- Use SOPs that are consistent with doctrine to simplify mission orders. Periodically review and change SOPs as needed.
- Strive for maximum planning time for you and your subordinates.
- Use common language/vocabulary and doctrinally correct standard terminology and control measures, such as FSCL, zone of engagement, RFL, and others.

- Ensure thorough coordination is performed.
- Plan for and establish effective communications.
- Plan for collocation of CPs as appropriate to the mission, such as during a passage of lines.
- Designate and employ LOs as appropriate.
- Make sure ROE are clear.
- Consider the effect of fratricide on key elements of terrain analysis (OCOKA).
- Conduct rehearsals whenever the situation allows time to do so.
- Be in the right place at the right time. Use position location/navigation (GPS) devices; know your location and the locations of adjacent units (left, right, leading, and follow-on); and synchronize tactical movement.
- Include fratricide incidents in after-action reviews (AAR).

## **FRATRICIDE RISK CONSIDERATIONS (OPORD FORMAT)**

This section, which parallels the five-paragraph OPORD, contains key factors and considerations in fratricide reduction. This is not a change to the OPORD format; rather, it should be used during OPORD development to ensure fratricide reduction measures are included in the order. It is not a strict guide. The factors and considerations are listed where they would likely appear in the OPORD, but they may warrant evaluation during preparation of other paragraphs.

### **1. Situation.**

#### **a. Enemy forces.**

- (1) Are there similarities among enemy and friendly equipment and uniforms that could lead to fratricide?
- (2) What languages do enemy forces speak? Could these contribute to fratricide risk?

(3) What are the enemy's deception capabilities and its past record of deception activities?

(4) Do you know the locations of enemy forces?

b. Friendly forces.

(1) Among the allied forces, are there differences (or similarities with enemy forces) in language, uniform, and equipment that could increase fratricide risk during combined operations?

(2) Could differences in equipment and uniforms among US armed forces increase fratricide risk during joint operations?

(3) What differences in equipment and uniforms can be stressed to help prevent fratricide?

(4) What is the friendly deception plan?

(5) What are the locations of your unit and adjacent units (left, right, leading, follow-on)?

(6) What are the locations of neutrals and noncombatants?

c. Own forces.

(1) What is the status of training activities? What are the levels of individual, crew, and unit proficiency?

(2) Will fatigue be a factor for friendly forces during the operation? Has an effective sleep plan been developed?

(3) Are friendly forces acclimatized to the area of operations?

(4) What is the age (new, old, or mix) and condition of equipment in friendly units? What is the status of new equipment training (NET)?

(5) What are the expected MOPP requirements for the operation?

d. Attachments and detachments.

- (1) Do attached elements know the above information regarding enemy and friendly forces?
- (2) Are detached elements supplied the above information by their gaining units?

e. Weather.

- (1) What are the expected visibility conditions (light data and precipitation) for the operation?
- (2) What effect will heat and cold have on soldiers, weapons, and equipment?

f. Terrain.

- (1) Do you know the topography and vegetation (such as urban, mountains, hilly, rolling, flat, desert, swamp/marsh, prairie/steppe, jungle, dense forest, open woods) of the expected area of operations?
- (2) Have you evaluated the terrain using the factors of OCOKA?

2. Mission. Is the mission, as well as all associated tasks and purposes, clearly understood?

3. Execution.

a. Task organization.

- (1) Has the unit worked under this task organization before?
- (2) Are SOPs compatible with the task organization (especially with attached units)?
- (3) Are special markings or signals (for example, cats' eyes, chemlites, or panels) needed for positive identification of uniforms and equipment?
- (4) What special weapons and/or equipment are to be used? Do they look or sound like enemy weapons and/or equipment?

b. Concept of the operation.

- (1) Maneuver. Are main and supporting effort is identified to ensure awareness of fratricide risks and prevention?
- (2) Fires (direct and indirect).
  - (a) Are priorities of fires identified?
  - (b) Have target lists been developed?
  - (c) Has the fire execution matrix/overlay been developed?
  - (d) Have locations of denial areas (minefield, FASCAM) and contaminated areas (ICM, NBC) been identified?
  - (e) Are the locations of all supporting fire targets identified in the OPORD/OPLAN overlays?
  - (f) Are aviation and CAS targets clearly identified?
  - (g) Has the direct-fire plan been developed?
  - (h) Have FPF been designated?
  - (i) Have you identified and verified sector limits?
- (3) Engineer tasks.
  - (a) Are friendly minefield, including FASCAM and ICM dud-contaminated areas, known?
  - (b) Are obstacles identified, along with the approximate time needed for reduction/breaching of each?
- (4) Tasks to each subordinate unit. Are friendly forces identified, as appropriate, for each subordinate maneuver element?
- (5) Tasks to CS/CSS units. Have locations of friendly forces been reported to CS/CSS units?

- (6) Coordinating instructions.
  - (a) Will a rehearsal be conducted? Is it necessary? Are direct and indirect fires included?
  - (b) Is a briefback necessary?
  - (c) Are appropriate control measures clearly explained and illustrated in the OPORD and overlays? Have they been disseminated to everyone who has a need to know? What is the plan for using these control measures to synchronize the battle and prevent fratricide?
  - (d) Have target/vehicle identification drills been practiced?
  - (e) Do subordinate units know the immediate action, drill, or signal for “cease fire” or “I am friendly” if they come under unknown or friendly fire? Is there a backup action?
  - (f) Is guidance in handling dud munitions, such as ICMs and CBUs, included?

#### 4. Service Support.

- a. Are train locations and identification markings known by everyone?
- b. Do medical and maintenance personnel know the routes between train units?

#### 5. Command and Signal.

- a. Command.
  - (1) What is the location of the commander and key staff?
  - (2) What is the chain of command?
- b. Signal.
  - (1) Do instructions include signals for special and emergency events?
  - (2) Do instructions include how to identify friendly forces to aircraft?
  - (3) Do instructions include backup codewords and visual signals for all special and emergency events?
  - (4) Are SOI distributed to all units with a need to know, such as higher, lower, adjacent, leading, and follow-on?