

## Appendix A

# ADA Employment Principles, Guidelines, and Priorities

This appendix describes how ADA commanders use employment principles and guidelines and priority considerations to design air and missile defenses. ADA commanders at all echelons use these principles, guidelines, and considerations for AMD planning. When applying these principles and guidelines, planners must consider the tactical and technical capabilities of each weapon and sensor system as well as the relevant factors of METT-TC, IPB, and the air and missile defense priorities.

### EMPLOYMENT PRINCIPLES

A-1. Commanders apply four principles when planning active air and missile defense operations. These principles are mass, mix, mobility, and integration.

#### MASS

A-2. Mass is the concentration of air and missile defense combat power. It is achieved by assigning enough firepower to successfully defend the force or the asset against air and missile attack or surveillance. To mass air and missile defense combat power, commanders may have to accept risks in other areas of the battlefield.

#### MIX

A-3. Mix is the employment of a combination of weapons systems to protect the force from the air threat. Mix offsets the limitations of one system with the capabilities of another and complicates the problem of the attacker. All joint and combined arms resources are considered when applying this principle. Proper mix causes enemy aircraft to adjust their tactics. Enemy maneuvers designed to defeat one weapon system may make an aircraft vulnerable to another weapon system.

#### MOBILITY

A-4. Mobility is the capability to move from place to place while retaining the ability to perform the air and missile defense mission. The mobility of air and missile defense resources must be equivalent to the mobility of the supported asset. First priority for mobility should be planning moves that support accomplishment of the mission. Tactical situations may dictate additional moves to enhance survivability.

**INTEGRATION**

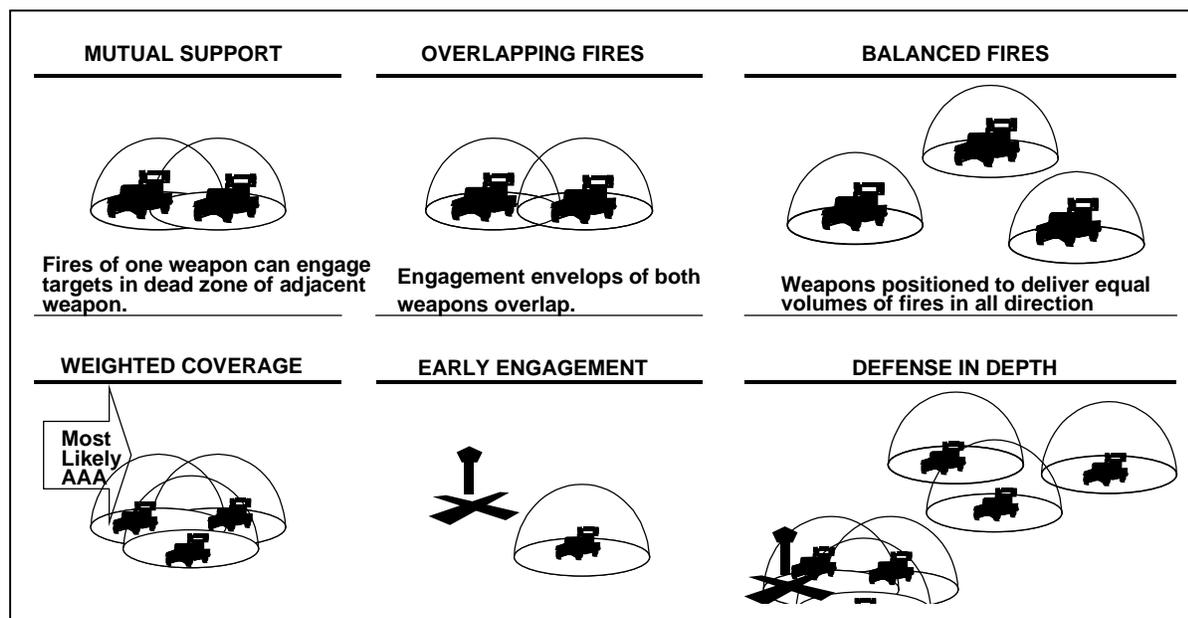
A-5. Integration is the close coordination of effort and unity of action that maximizes operational effectiveness. Active air and missile defense operations must be integrated into the supported commander's concept of the operation. The ADA scheme of maneuver entails vertical and horizontal integration of air and missile defense systems across the width and depth of the battlefield.

**EMPLOYMENT GUIDELINES**

A-6. There are six employment guidelines when planning and positioning air and missile defense resources: mutual support, overlapping fires, balanced fires, weighted coverage, early engagement, and defense in depth (figure A-1).

**MUTUAL SUPPORT**

A-7. Mutual support is achieved by positioning weapons so that the fires of one weapon can engage targets within the dead zone of the adjacent weapon system. For gun systems the dead zone is usually small and the need for mutual support is minimal. For missile systems, especially command-guided systems, the dead zone can be large and the need for mutual support is great.



**Figure A-1. Air Defense Artillery Employment Guidelines**

**OVERLAPPING FIRES**

A-8. Overlapping fires are achieved by positioning weapons so their engagement envelopes overlap. Because of the many altitudes from which the air threat can attack, the defense planner must apply mutual support or overlapping fires vertically and horizontally.

### **BALANCED FIRES**

A-9. Balanced fires are achieved by positioning weapons to deliver an equal volume of fire in all directions. This may be necessary when air and missile defense is used in an area where the terrain does not canalize the attacker, or when the Air Avenue of approach is not predictable.

### **WEIGHTED COVERAGE**

A-10. Weighted coverage is achieved by combining and concentrating fires toward the most likely enemy air avenues of approach or direction of attack. Based on the tactical situation, a commander may risk leaving one direction of attack unprotected or lightly protected to weight his coverage toward another direction.

### **EARLY ENGAGEMENT**

A-11. Early engagement is achieved by positioning weapons so they can engage the threat before ordnance release; ideally, weapons should engage and destroy the enemy before he can fire on the defended asset.

### **DEFENSE IN DEPTH**

A-12. Defense in depth is achieved by positioning weapons so the air threat will come under an increasing volume of fire as it approaches the protected asset. Defense in depth lowers the probability that threat aircraft will reach the defended asset.

### **AIR AND MISSILE DEFENSE PRIORITIES**

A-13. The ADA commander considers METT-TC, IPB, and the supported commander's intent and concept of operations as he develops AMD priorities. Priorities are based on the factors of criticality, vulnerability, recuperability, and the threat (CVRT). The ADA commander recommends these priorities to the maneuver commander for approval.

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