Attack Aviation Operations

CPT FLEMING

TERMINAL LEARNING OBJECTIVE

Action: Identify Attack Aviation Operations.

Condition: In a classroom environment, given a briefing describing Attack Aviation Operations.

Standard: Correctly identify Aviation Operations IAW FM 3-04.126 and FM 1-112

Administrative Issues

- SAFETY
  - GENERAL
- RISK ASSESSMENT
  - LOW
- ENVIRONMENTAL CONSIDERATIONS
  - NONE
- EVALUATION
  - NONE

ENABLING LEARNING OBJECTIVE

Action: Identify Attack Operations.

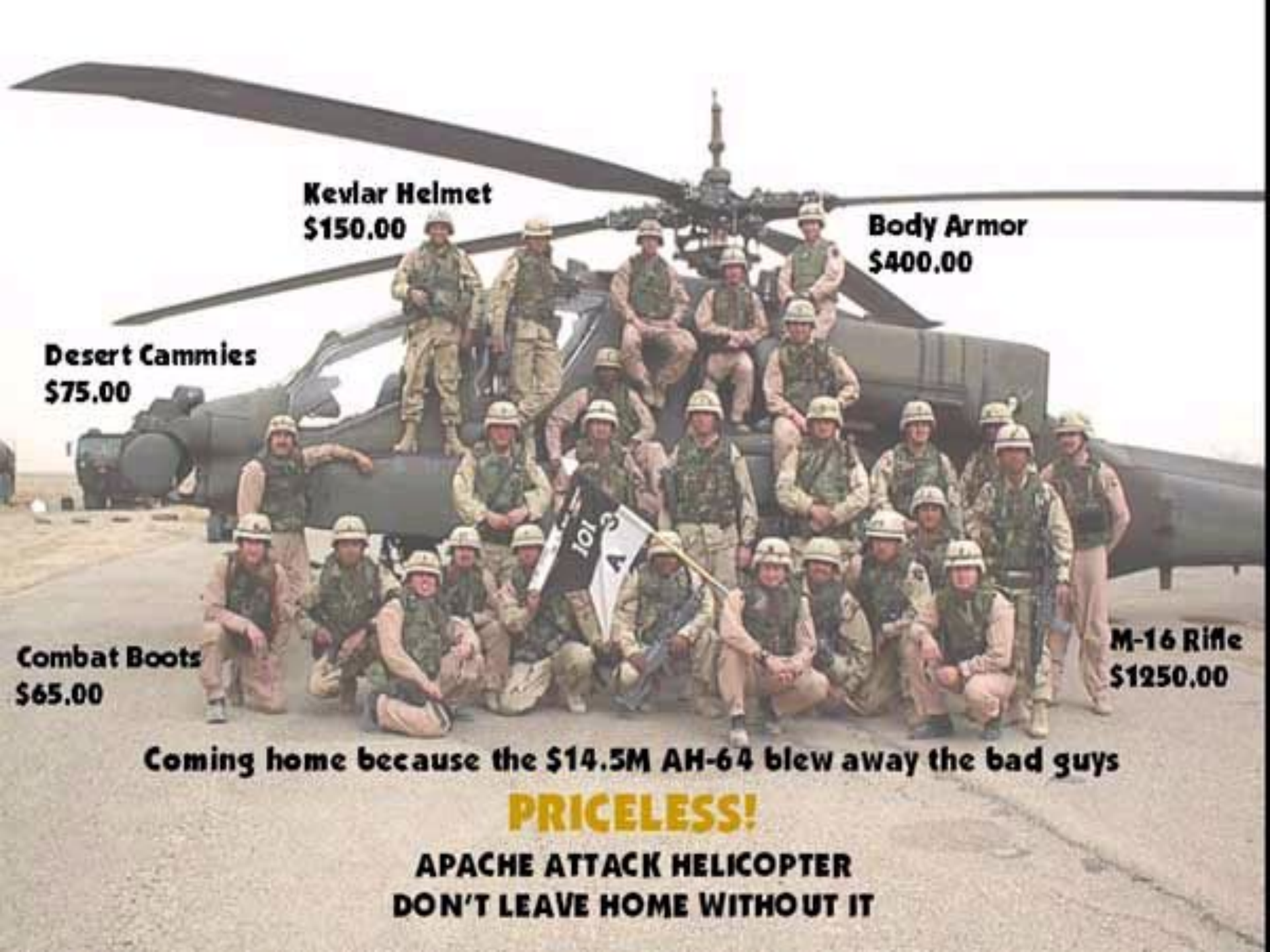
Condition: In a classroom environment, given a briefing describing Attack Operations.

Standard: Identify Attack Operations IAW FM 3-04.126 and FM 1-112

ATTACK HELICOPTER FUNDAMENTALS

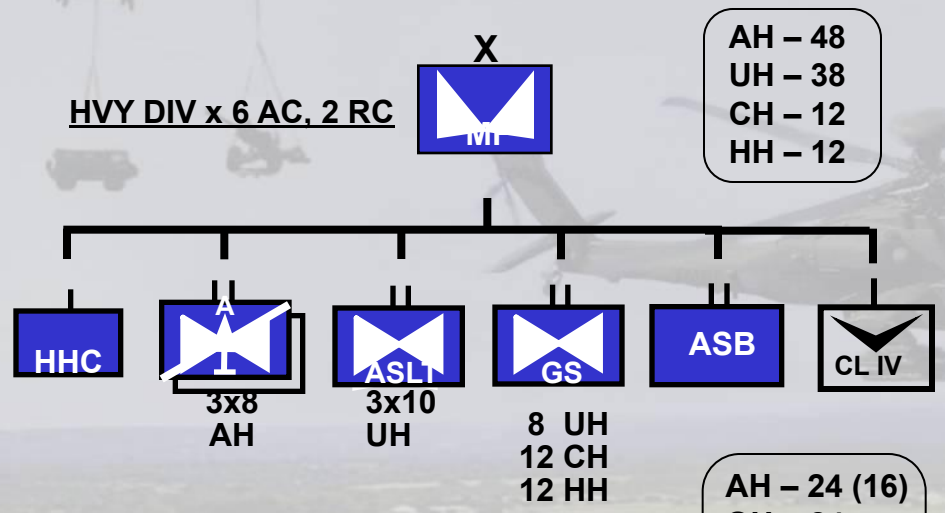
(FM 1-112, Attack Helicopter Operations)

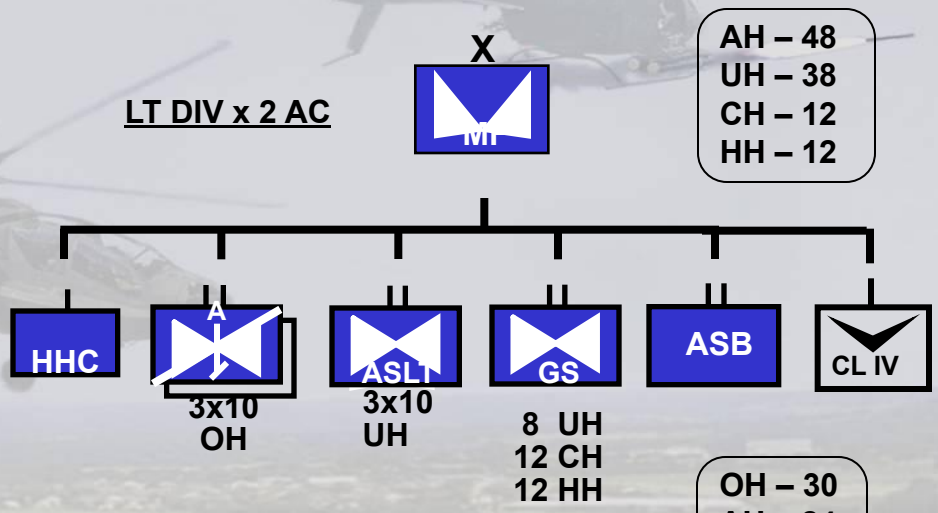
- Provide ground commander highly mobile and lethal armor, personnel, and material destruction capability
- Combat multiplier – never fights alone (Wingman concept)
- Aviation units are integrated into the combined arms down to the level at which they will be employed
- Capable of full spectrum operations
- Integration of air and ground assets essential for maximum effectiveness

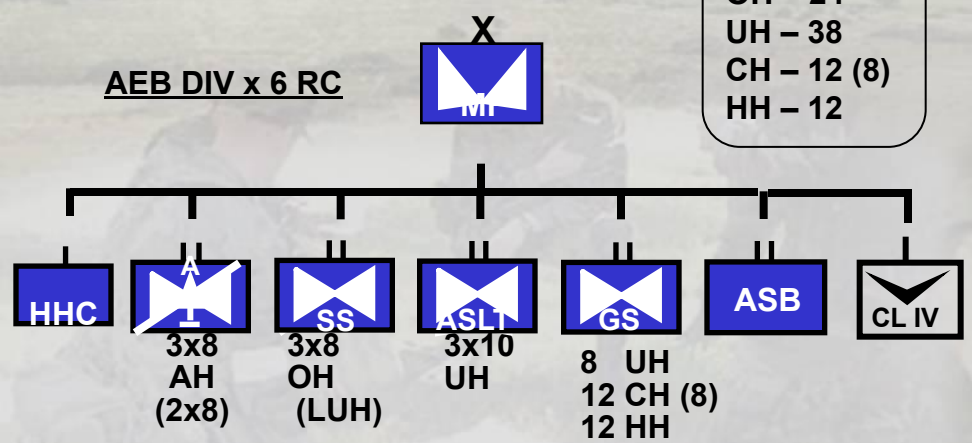

Kevlar Helmet
$150.00
Body Armor
$400.00
Desert Cammies
$75.00
Combat Boots
$65.00
M-16 Rifle
$1250.00
Coming home because the $14.5M AH-64 blew away the bad guys
PRICELESS!
APACHE ATTACK HELICOPTER
DON'T LEAVE HOME WITHOUT IT

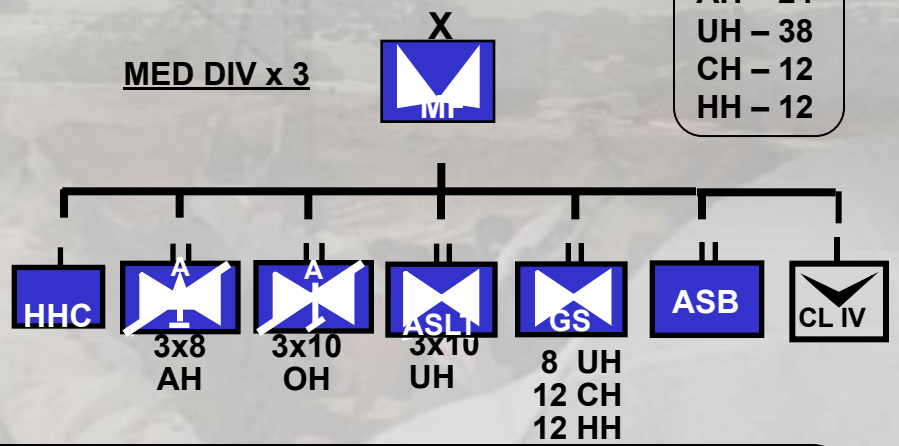
Aviation Brigades

- Multi-functional Aviation Brigades optimized to support up to five BCT's
- No organic aviation at the BCT
- Standardized Heavy, Light and Medium structure







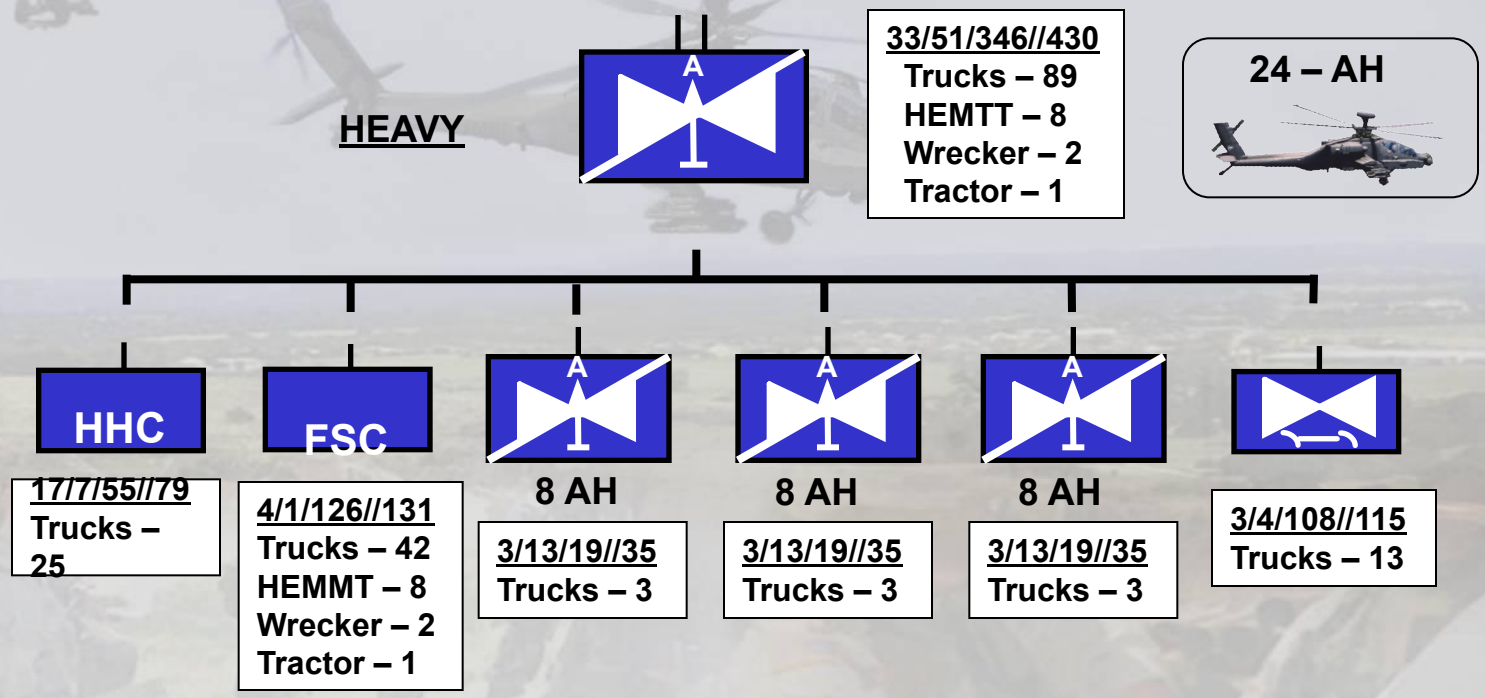


BRIGADE AVIATION ELEMENT (BAE)

- **Organic to each maneuver BCT**
- **Synchronizes aviation ops**
- **ABCS Communications**

MAJ	**BDE AVN OFFICER**	**CPT**	**PLANS OFFICER**
CW4	**AVN TAC WARRANT**	**SFC**	**AVN OPS/A2C2**
SSG	**AVN OPS/UAV**	**SPC**	**AVN OPS/FLT OPS**

Attack Reconnaissance Battalion



CAPABILITIES

THE AH-64D Longbow Apache

- 24 Aircraft per ATKHB
- Two versions: w/ Fire Control Radar (FCR)/Radar Frequency Interferometer (RFI) (9/Battalion) and w/o FCR/RFI (15/Battalion)
- FCR - w/ RF Hellfire missiles, provides AH64D a fire-and-forget capability
- Digital communication between aircraft in the flight
- Dual Engine, Pilot Night Vision Sensor(PNVS), Target Acquisition Designation System(TADS), improved weapons accuracy

LIMITATIONS

THE AH-64D Longbow Apache

The primary limitations of the AH-64D to consider are:

THREAT IDENTIFICATION

INFRARED RADIATION CROSSOVER

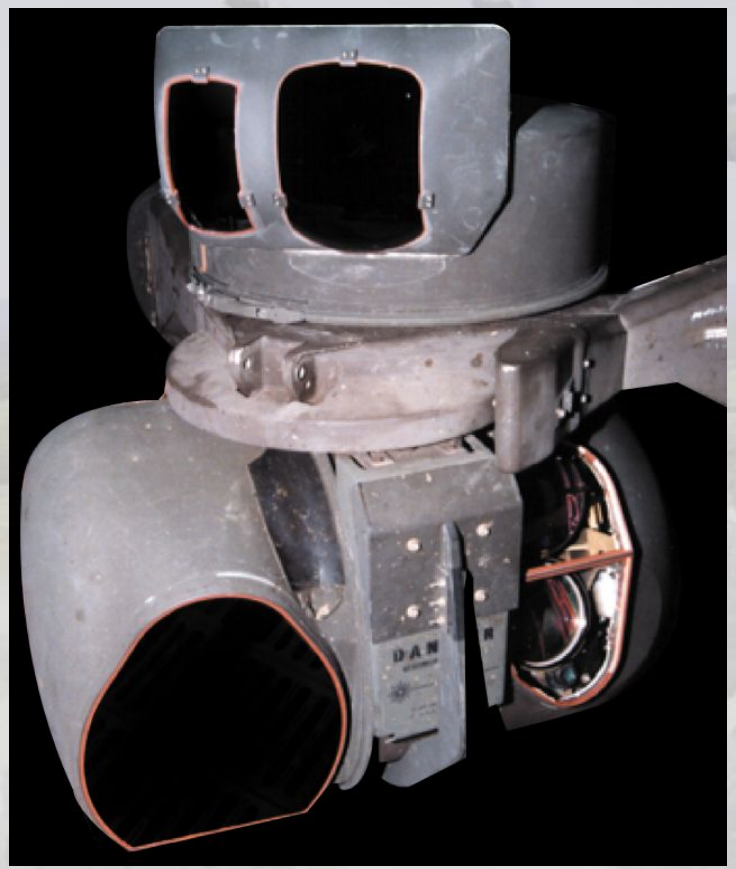
OBSCURANTS

LOW CLOUD CEILINGS

INSTRUMENT FLIGHT RULES

CS/CSS INTENSIVE

LONGBOW SENSORS



Pilot Night Vision System (PNVS):

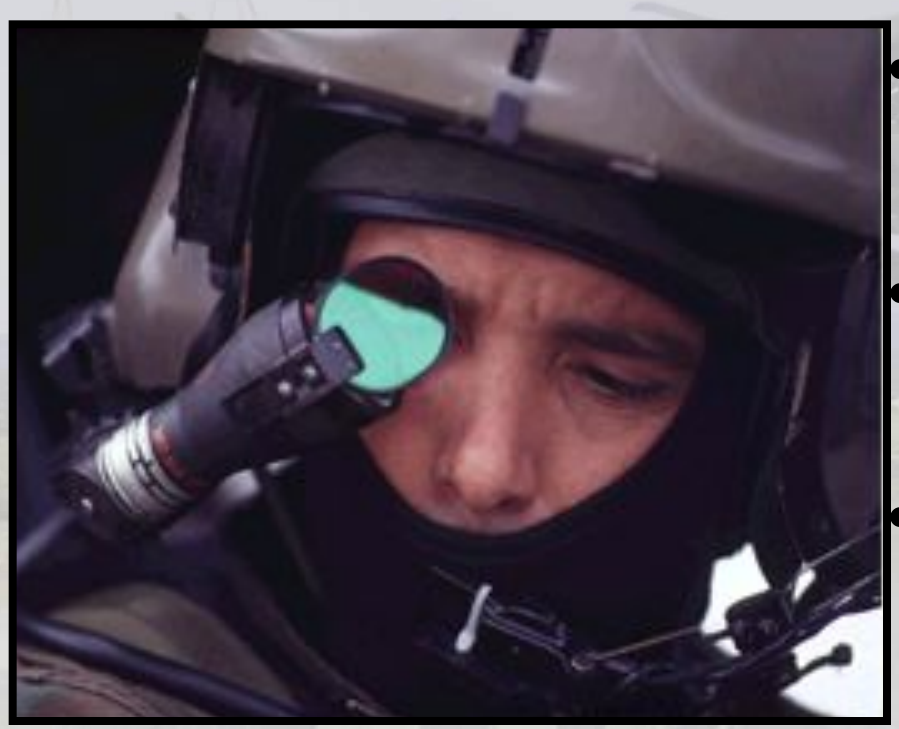
- Primary sensor used for flying aircraft
- No ability to change Field of View
- Not as good as the Bradley or M1 FLIRs

Targeting and Designation System (TADS) :

- Primary sensor used by the CPG for weapons engagements
- Ability to change Fields of View

LONGBOW SENSORS

Integrated Helmet and Display Sight System (IHADSS)



- Display provides unobstructed imagery for pilotage and targeting
- Superimposed flight and weapons symbology
- Weapons/sensors may be cued and/or slaved to head axes
- Normal images may be supplemented with radar profiling data
- NVGs can be used in front seat, but not in conjunction with IHADSS

FLIR is marginal for positive ID

Front Seat NVG Program

CREW STATIONS

- Multi-purpose color displays
- Digitally shared graphics
- Enhanced situational awareness
- Voice and aural cues
- Radios (FM, UHF, VHF)
- High cockpit workload – crew coordination is essential

SITUATIONAL AWARENESS

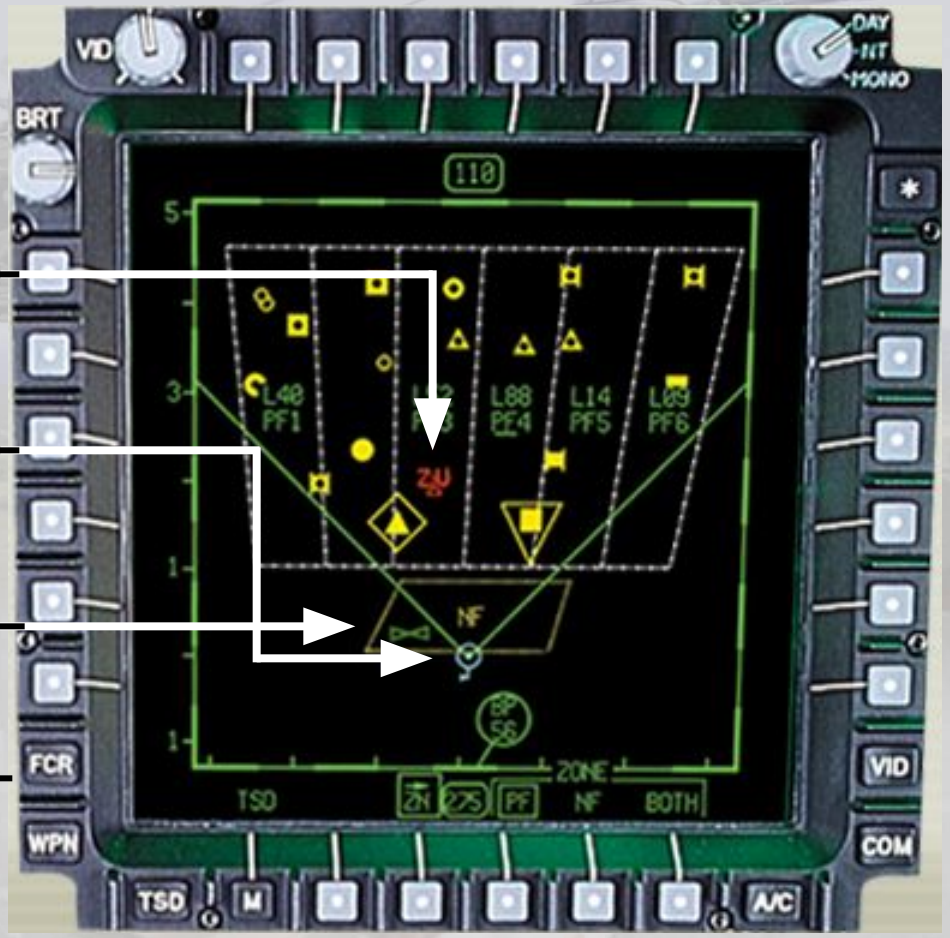
I know where the enemy is

I know where I am

~~I know where "my" friends are~~

I also know……..

- Routes
- Friendly Positions
- No Fire Zones
- Priority Fire Zones



FCR / RFI

FIRE CONTROL RADAR / RADAR FREQUENCY INTERFEROMETER

Fire Control Radar:

- Detect
- Locate
- Classify
- Prioritize
- Does not ID Friend or Foe
- Not as effective in urban environments due to clutter

Radar Frequency Interferometer:

- Provides ID of Radar threats

THE AH-64D

Longbow Apache

Fire Control Radar (FCR)

- Rapid target detection /classification / prioritization
- In excess of 8 kilometer detection ranges

Radar Frequency Interferometer (RFI)

- 360° threat warning
- ± 45° precision direction finding
- Boresighted with the FCR

30mm CHAIN GUN

Primary Round: HEDP (High Explosive Dual Purpose)

Primary weapon used in close combat attacks

Max Effective Range:1500-1700m

Max Payload :
- 300 Rounds (w/ Robbie Tank)
- 1200 Rounds (w/o Robbie)

“This is our Sniper Rifle…”

AERIAL ROCKET SYSTEM

Primary Round: 2.75” Folding Fin Aerial Rocket

<u>Type of Rockets:</u>

MPSM

High Explosive

Flechette

Smoke

Illumination

Max Effective Range: 8km (depends on Type)

“2.75 in. Rockets are an AREA WEAPON SYSTEM!

…Not ideal in a SOSO environment.”

HELLFIRE MISSILE

PK for Planning:
(SAL and RF)
75%

Capable of loading
up to 16
*Standard Load - 8

Range:
800m – 8k

2 types:
SAL and RF
(Semi-Active Laser
& Radar Frequency)

Attack Reconnaissance Battalion

LIGHT

33/63/300//396
Trucks – 84
HEMTT – 8
Wrecker – 2
Tractor – 1

30 – OH

HHC

17/7/56//80
Trucks – 20

FSC

4/1/133//138
Trucks – 42
HEMMT – 8
Wrecker – 2
Tractor – 1

10 OH

3/17/13//33
Trucks – 3

10 OH

3/17/13//33
Trucks – 3

10 OH

3/17/13//33
Trucks – 3

3/4/72//79
Trucks – 13

CAPABILITIES

THE OH-58D Kiowa Warrior

The primary missions of this aircraft are armed reconnaissance and light attack.

- 30 Aircraft per ATKHB
- Single-engine and dual seat
- Mast-mounted sight has a high resolution TV camera, IR Thermal imaging, laser rangefinder, and a laser designator
- Moving map display
- Video recording and cockpit playback of television and thermal imagery from the mission.
- Transportable in the C-130, C-141, C-5, and C-17

LIMITATIONS

THE OH-58D Kiowa Warrior

The primary limitations of the OH-58D to consider are:

THREAT IDENTIFICATION

INFRARED RADIATION CROSSOVER

OBSCURANTS

LOW CLOUD CEILINGS

INSTRUMENT FLIGHT RULES

OH-58D Weapons Systems

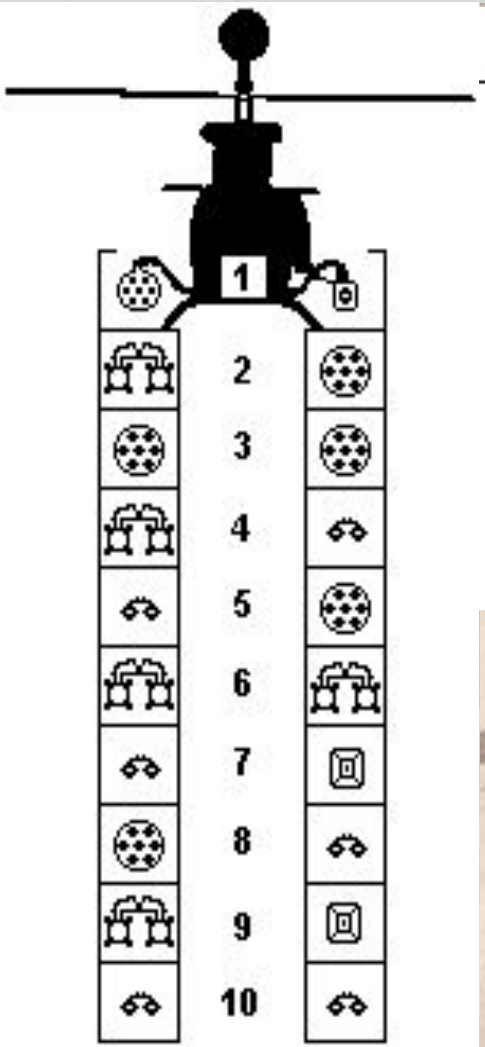
The OH-58D armament capabilities consist of a .50-caliber machine gun, 2.75-inch rockets, Hellfire missiles, and air-to-air missiles. These systems are mounted on two universal weapons pylons based on mission requirements. The aircraft has a laser rangefinder/designator used to designate for the weapons system as well as provide range-to-target information for onboard weapons systems.

WEAPONS CAPABILITIES

OH-58D

WEAPON	LOAD	MAX EFF RNG
.50 CAL MG	500 RNDS	1000m
2.75” RKTS	7 Per POD(14)	4000m
HELLFIRE	2 Per SIDE(4)	5-8km
STINGER	2 Per SIDE(4)	4000m

OH-58D KIOWA WARRIOR



Legend

.50 Cal. Machine Gun

2.75 inch Hydra 70 Rockets (FFARs)

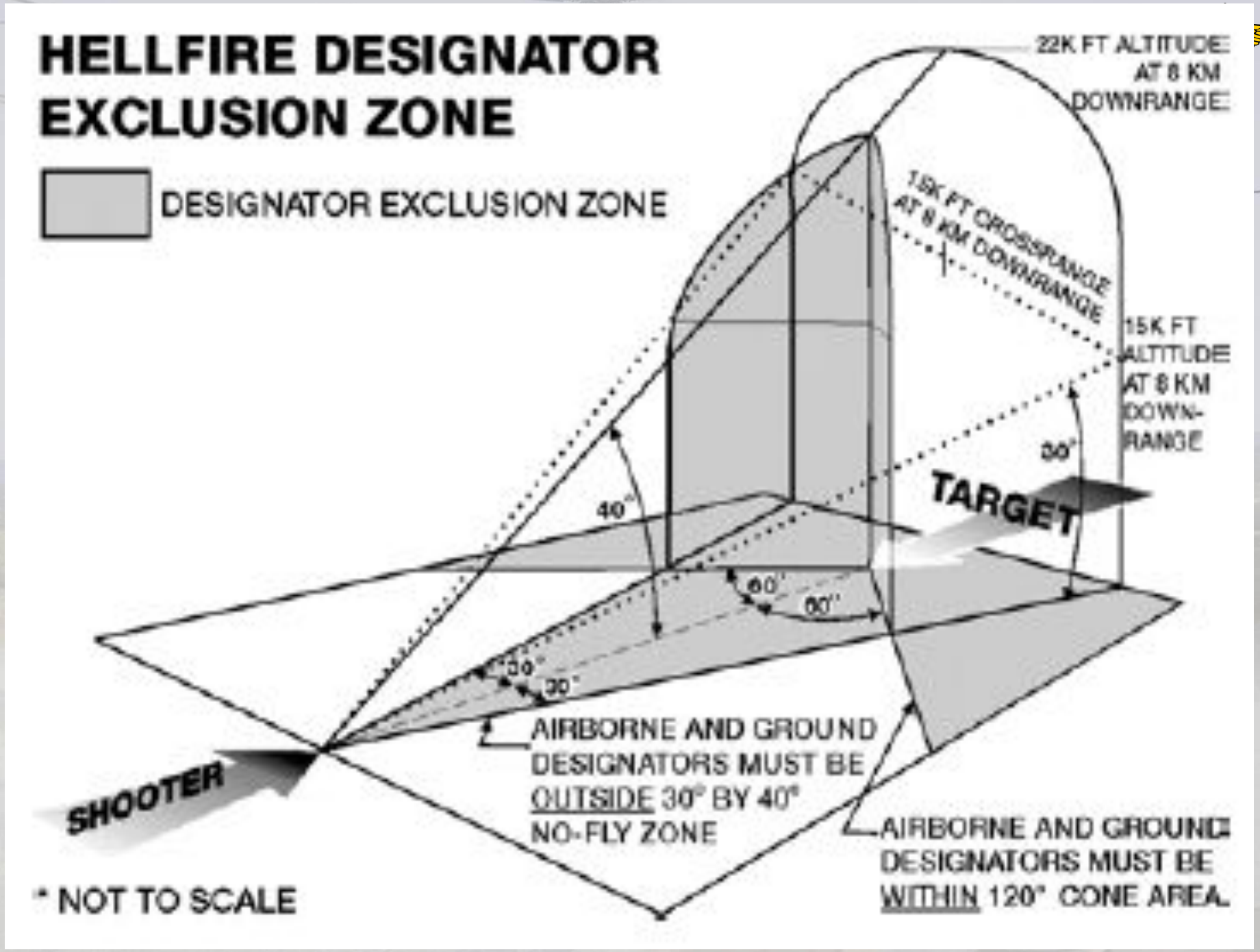
Hellfire Missiles

Air-to-Air Stinger (ATAS) Missiles

MARKING METHODS

Method	D	N	NVG	NVS	Friendly	Target
Smoke	X				X	X
Smoke IR	X		X		X	X
Signal Mirror	X				X	
IR Laser			X		X	X
Tracer	X	X	X			X
Glint Tape				X	X	
CID	X				X	
Strobe		X	X		X	
IR Strobe			X		X	
IR Panel				X	X	
Chem Light		X	X		X	
AN/PAQ-4			X			X
VS-17 Panel	X				X	
Spot Light		X	X		X	
MRE Heater				X	X	
AN/PEQ-2			X			X
Hydra 70 Illum	X	X	X	X		X
Ref FM 3-04.111 Appendix Q for more detail						

HELLFIRE DESIGNATOR EXCLUSION ZONE

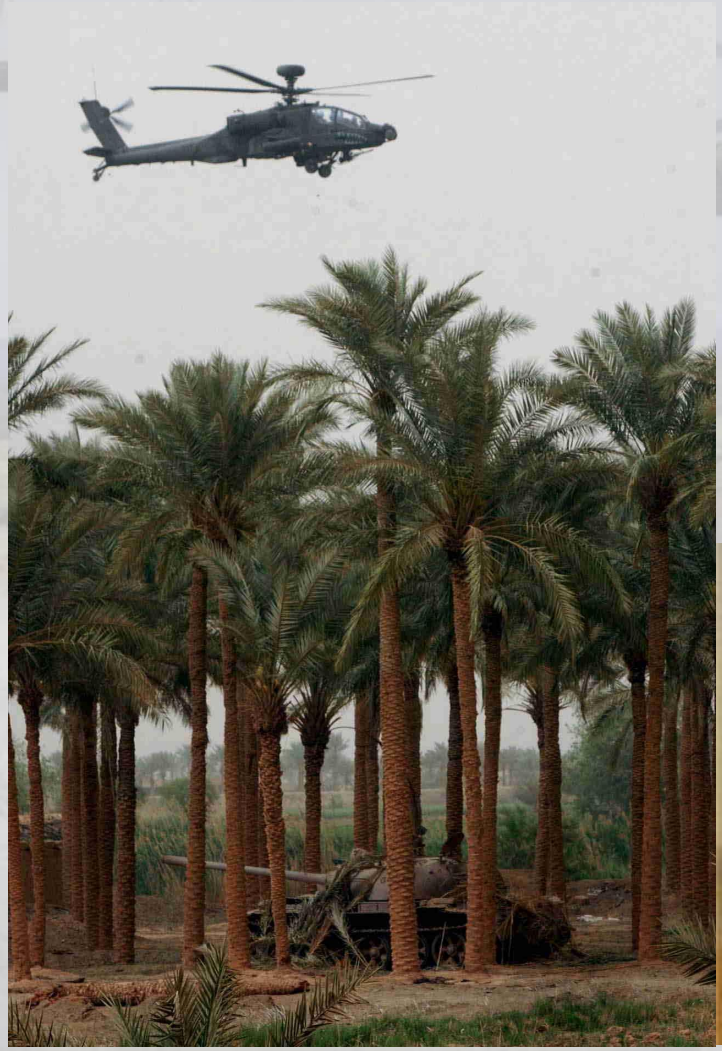


Danger Close

Table Q-1. Danger Close for Attack Helicopter Engagement

WEAPON	DESCRIPTION	DANGER CLOSE IN METERS
2.75" Rockets	Rocket with various warheads. Area weapon.	175
Hellfire	Precision guided. Point weapon.	75
20mm 25mm 30mm	Guns. Area weapons.	150

PRIMARY OBJECTIVE



DESTROY ENEMY FORCES USING FIREPOWER, MANEUVER, AND SHOCK EFFECT

OPERATIONAL ROLES

OFFENSE

- Movement to Contact
- Hasty Attack
- Deliberate Attack
- Exploitation
- Pursuit

DEFENSE

- Mobile
- Area

OTHER

- Recon
- Security

Forms of Attack

- **Hasty- Hasty attacks may serve as a precursor to a deliberate attack or may result from unexpected enemy contact.**

- **Deliberate- A deliberate attack is planned and carefully coordinated with all involved elements to provide synchronization of combat power at the decisive point.**

Types of Attacks

- **CCA - Close combat is inherent in maneuver and has one purpose - to decide the outcome of battles and engagements. It is carried out with direct-fire weapons and supported by indirect fire, CAS, and non-lethal effects**

- **Mobile Strike - Mobile strike combines ground based fires, attack aviation, unmanned systems and joint assets to mass effects, in order to isolate and destroy key enemy forces and capabilities and to shield friendly forces as they maneuver out of contact.**

The Defense

- The Attack Battalion (ATK BN) uses its mobility, long-range observation, and engagement capabilities to deny terrain to the enemy, destroy, attrit, delay, or disrupt enemy reserve forces, and to support the ground defense with fires, counterattacks, and shaping operations. Battalion operations remain offensive in nature.

- When enemy forces penetrate friendly lines, the ATK BN is prepared to conduct immediate counterattacks to limit or contain the penetration.

- Success of the defensive operation is dependant upon synchronization of all available combat capabilities.

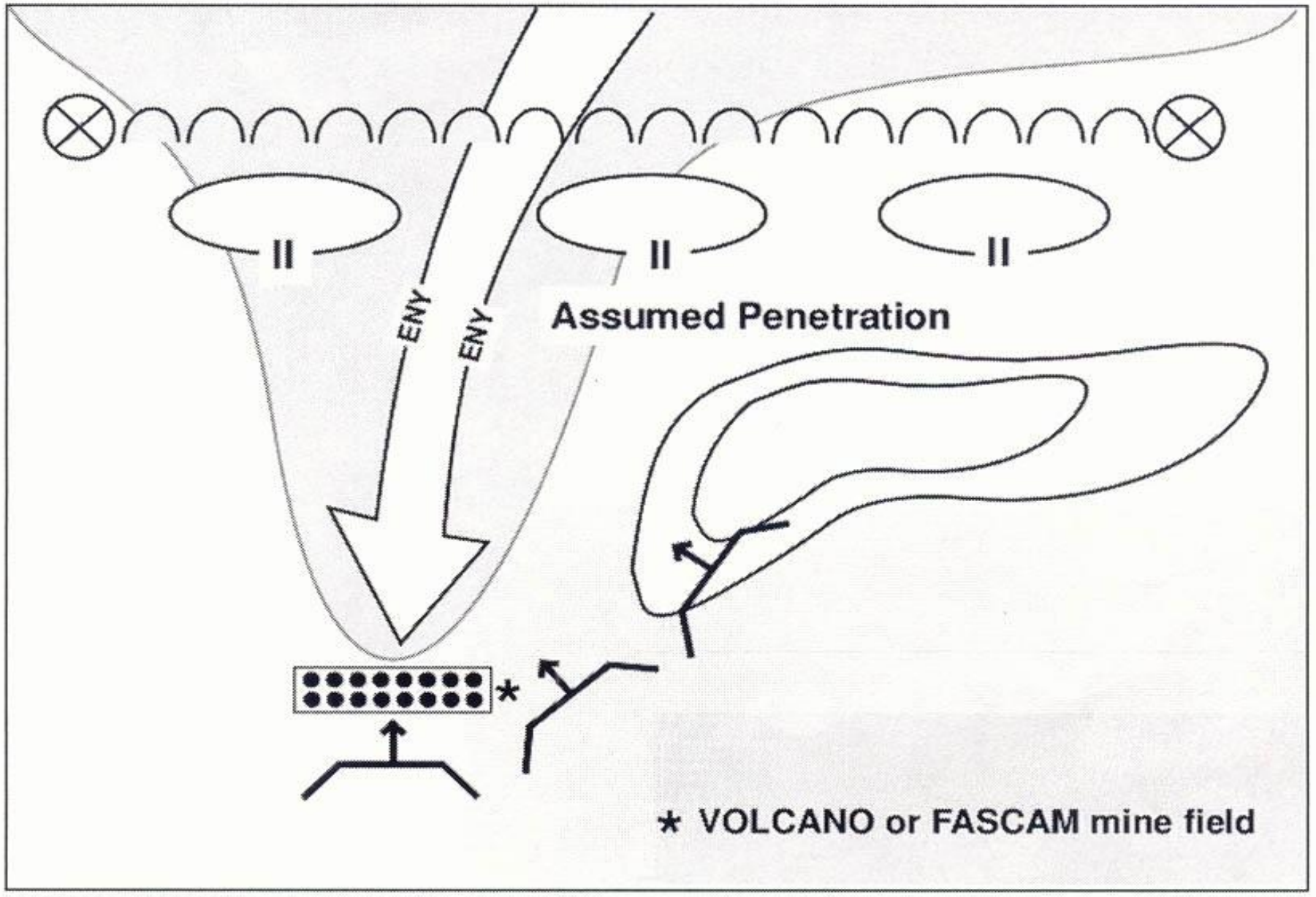
The Defense

- **Mobile Defense: ATK BN permits the enemy force to advance into a position that exposes them to counterattack and envelopment. The ATK BN is organized into two sub-units. The fixing force shapes the penetration while the striking force conducts the decisive attack.**

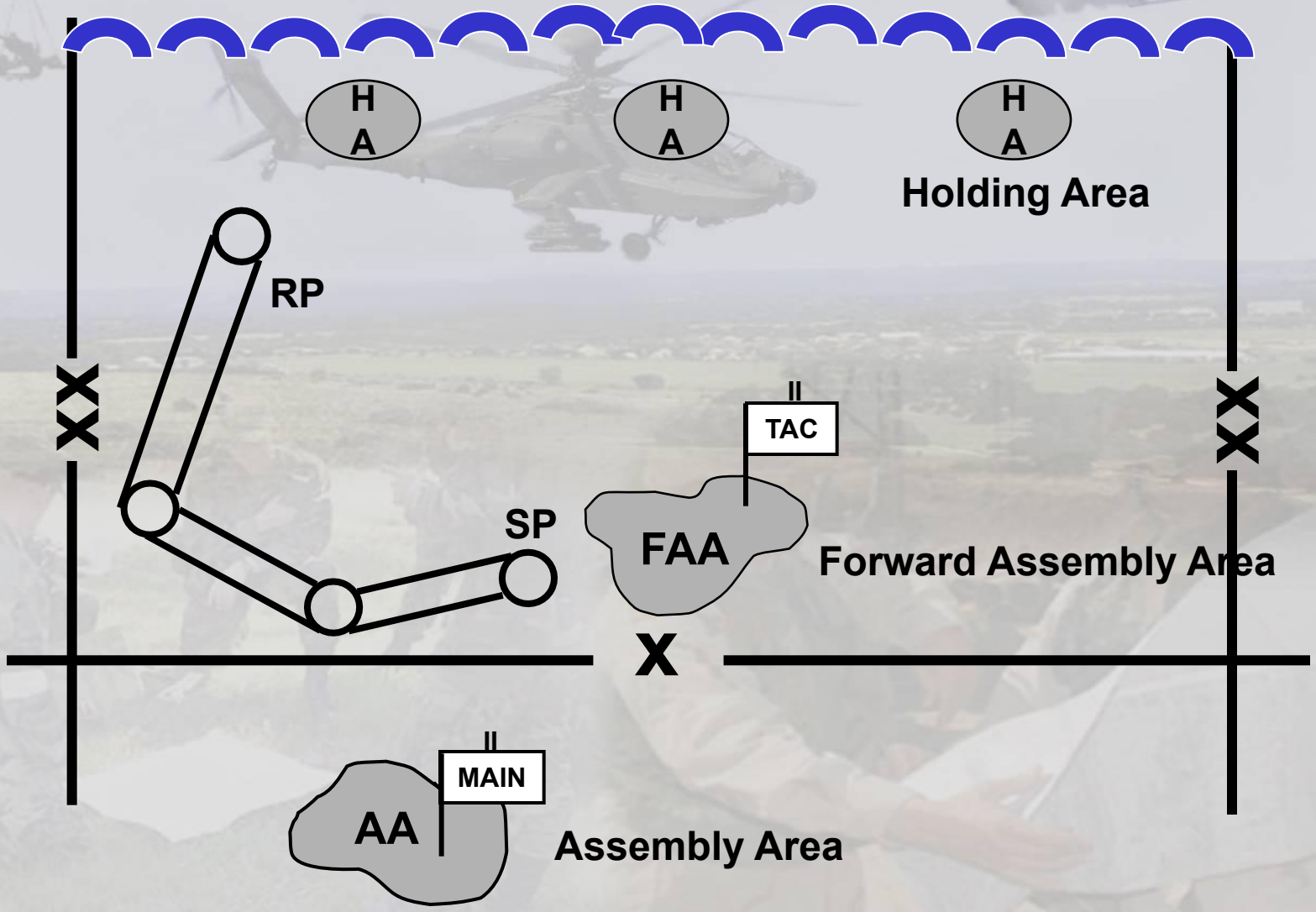
- **Area Defense: ATK BN is employed to help contain enemy penetrations and to conduct mobile strikes.**

- **Retrograde Operations: ATK BN can provide a rapid concentration and employment of fires to allow the ground force to disengage and reposition to subsequent positions.**

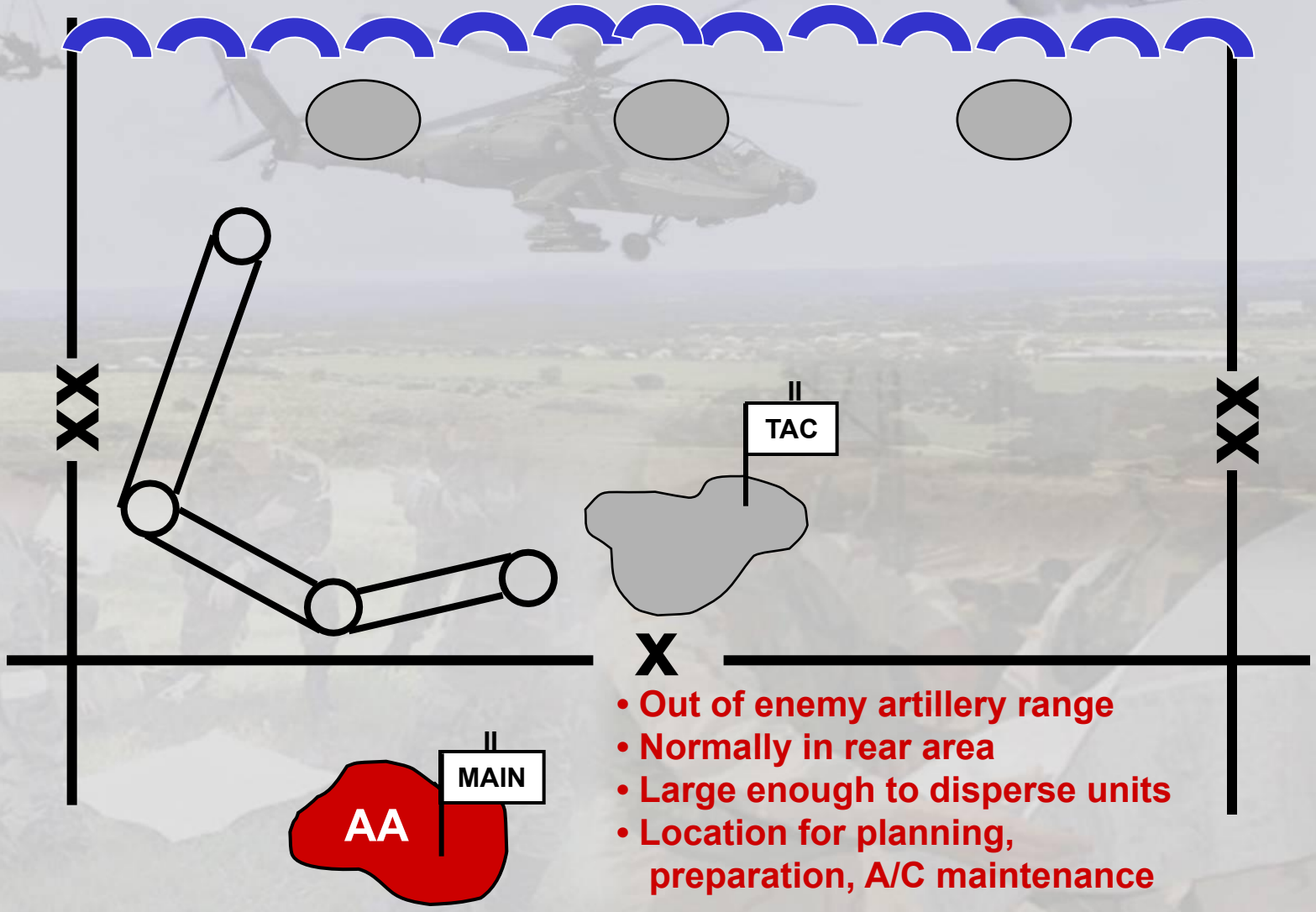
Battalion in the Counterattack



OPERATIONAL TERMS

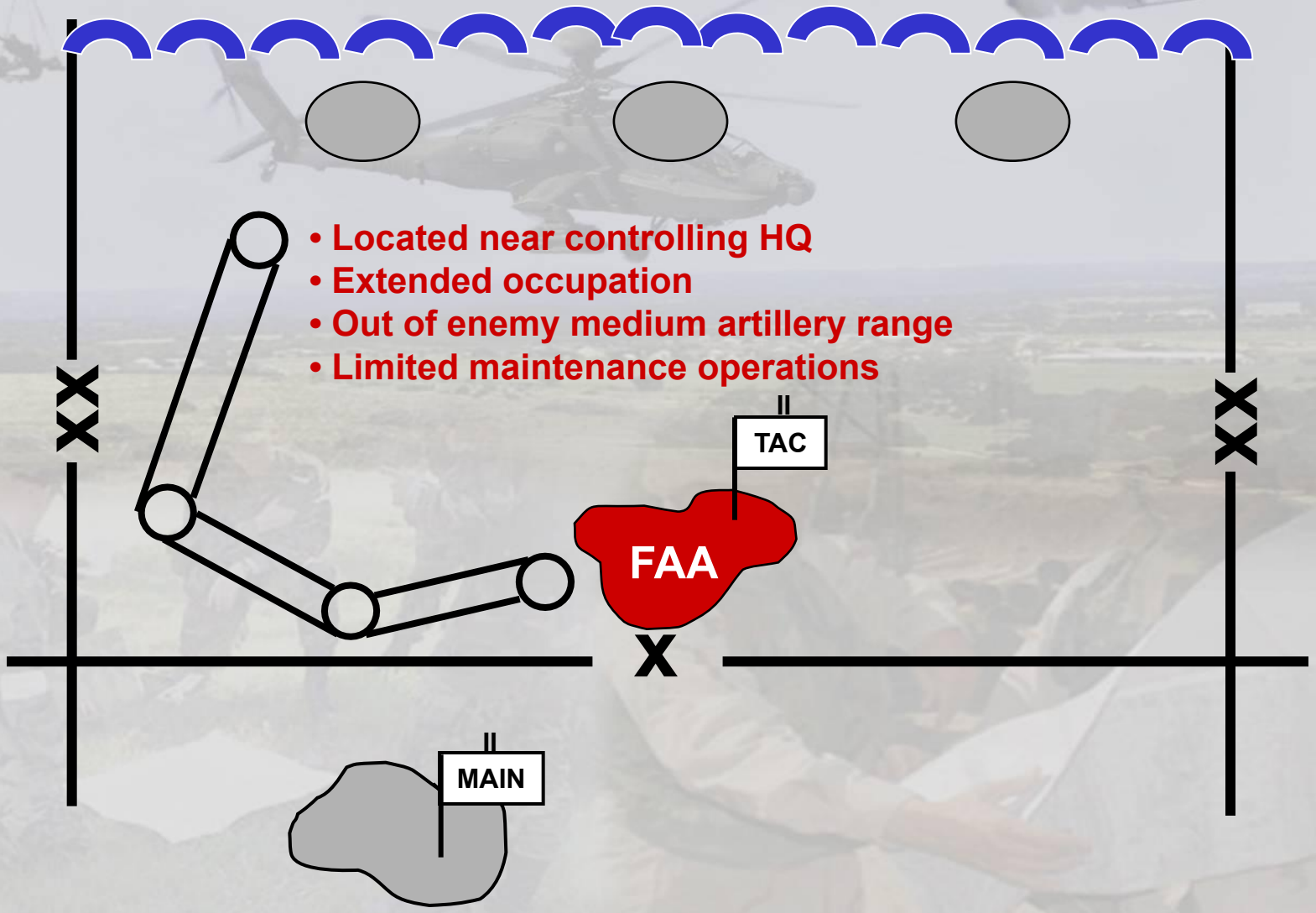


ASSEMBLY AREA

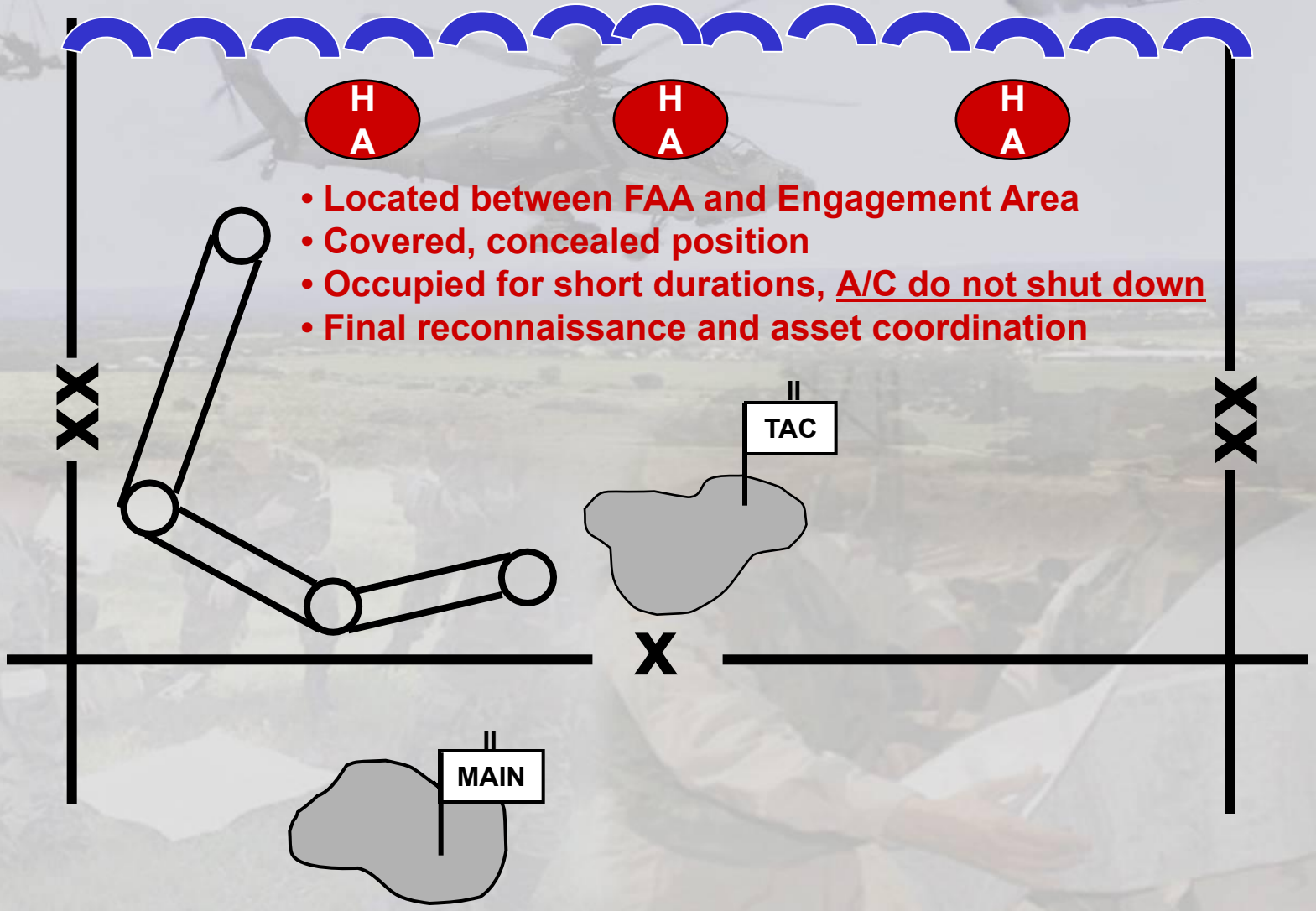


- Out of enemy artillery range
- Normally in rear area
- Large enough to disperse units
- Location for planning, preparation, A/C maintenance

FORWARD ASSEMBLY AREA

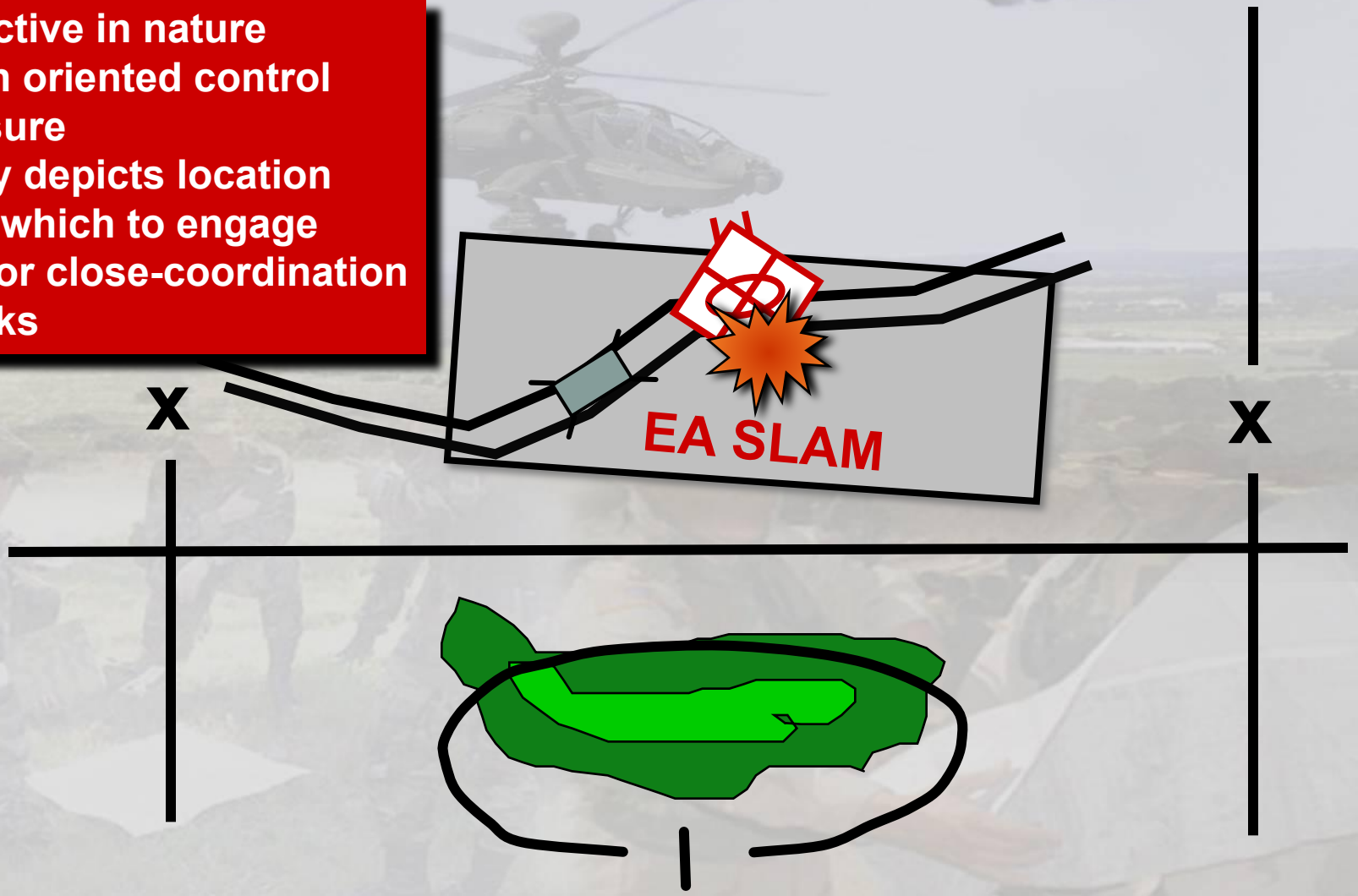


HOLDING AREA

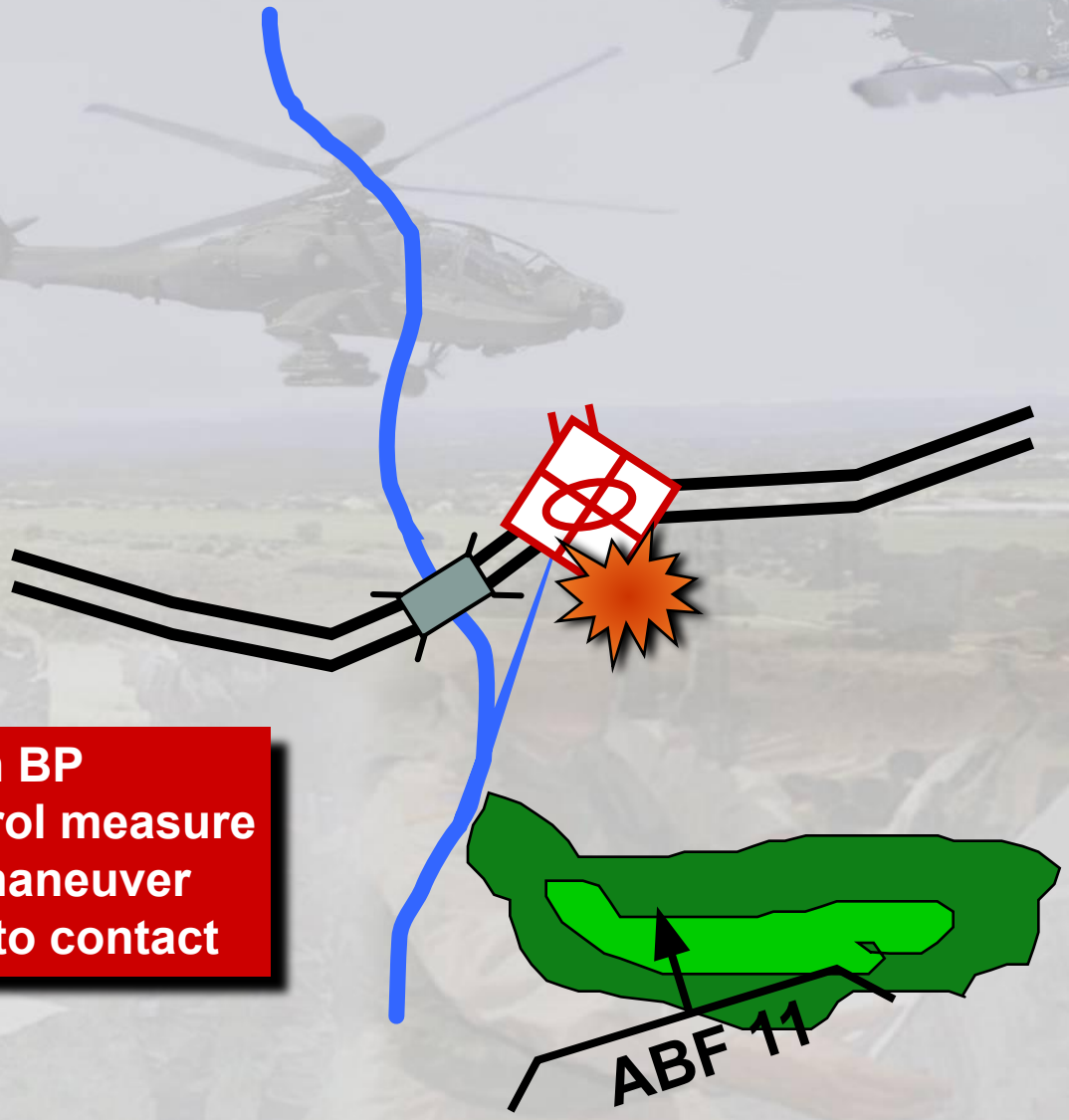


BATTLE POSITION

- Restrictive in nature
- Terrain oriented control measure
- Clearly depicts location from which to engage
- Ideal for close-coordination attacks



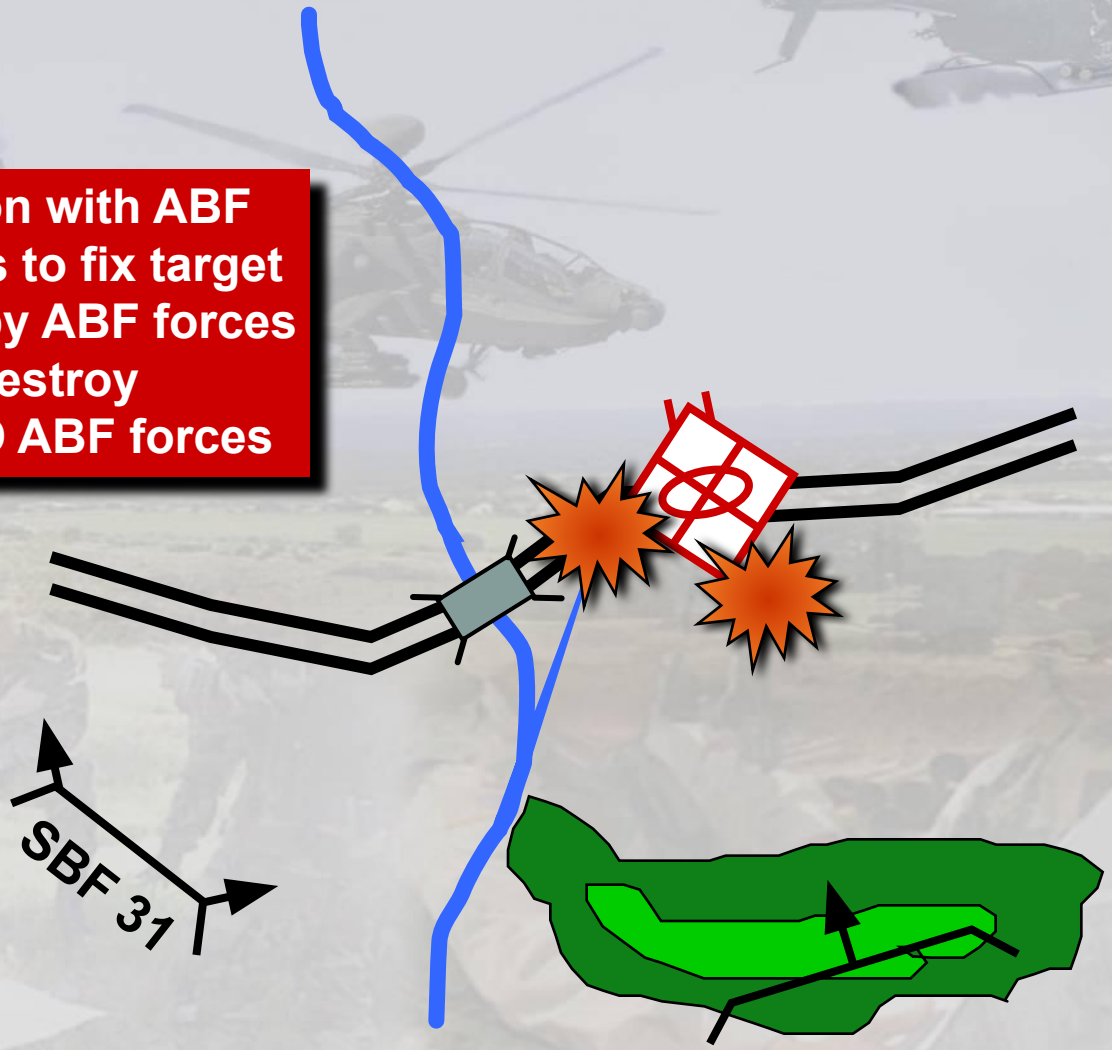
ATTACK BY FIRE POSITION



- Less restrictive than BP
- Force oriented control measure
- Allows freedom to maneuver
- Ideal for movement to contact

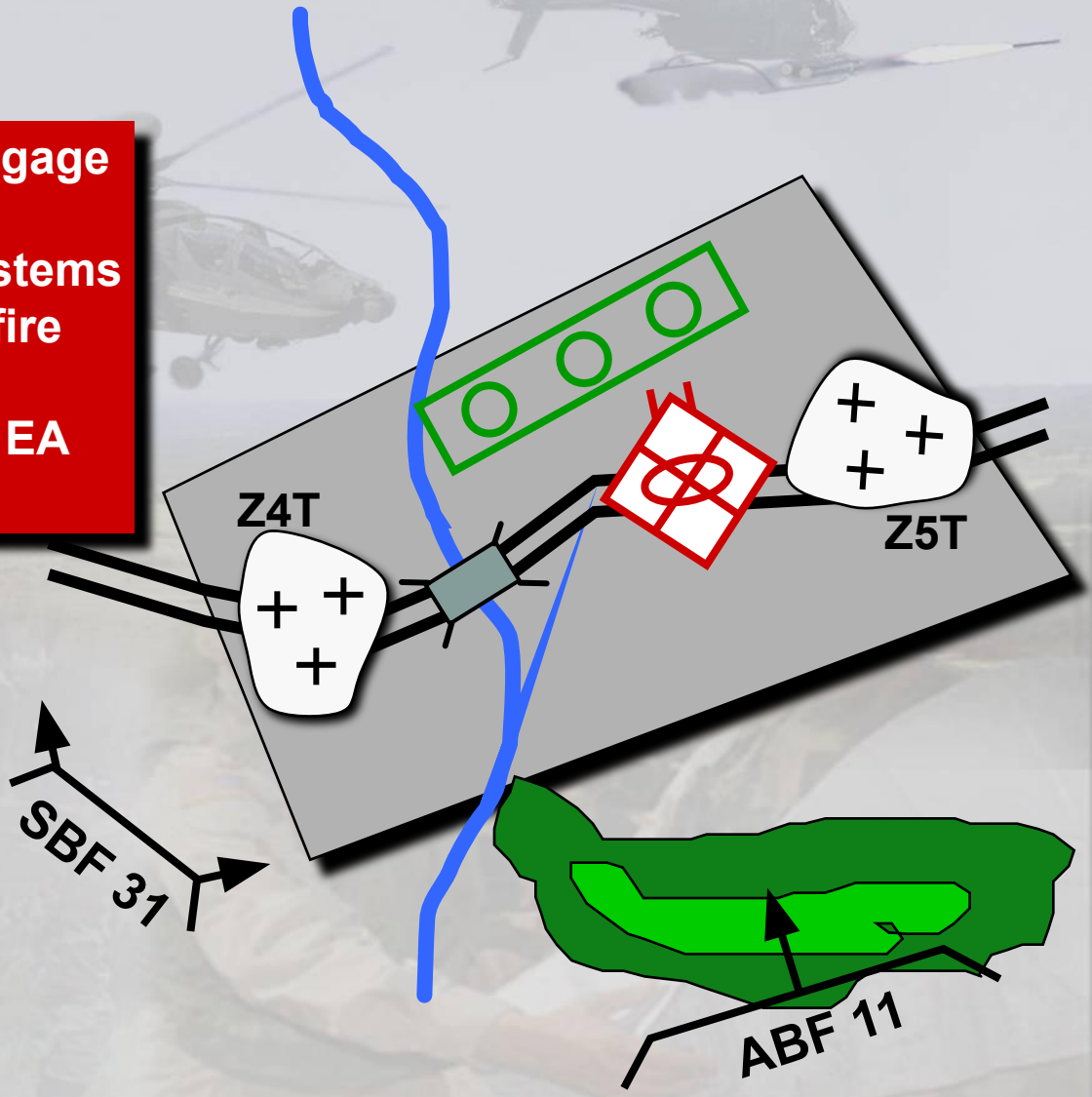
SUPPORT BY FIRE POSITION

- Used in conjunction with ABF
- Primary purpose is to fix target for engagement by ABF forces
- Can suppress or destroy enemy forces ISO ABF forces



ENGAGEMENT AREA

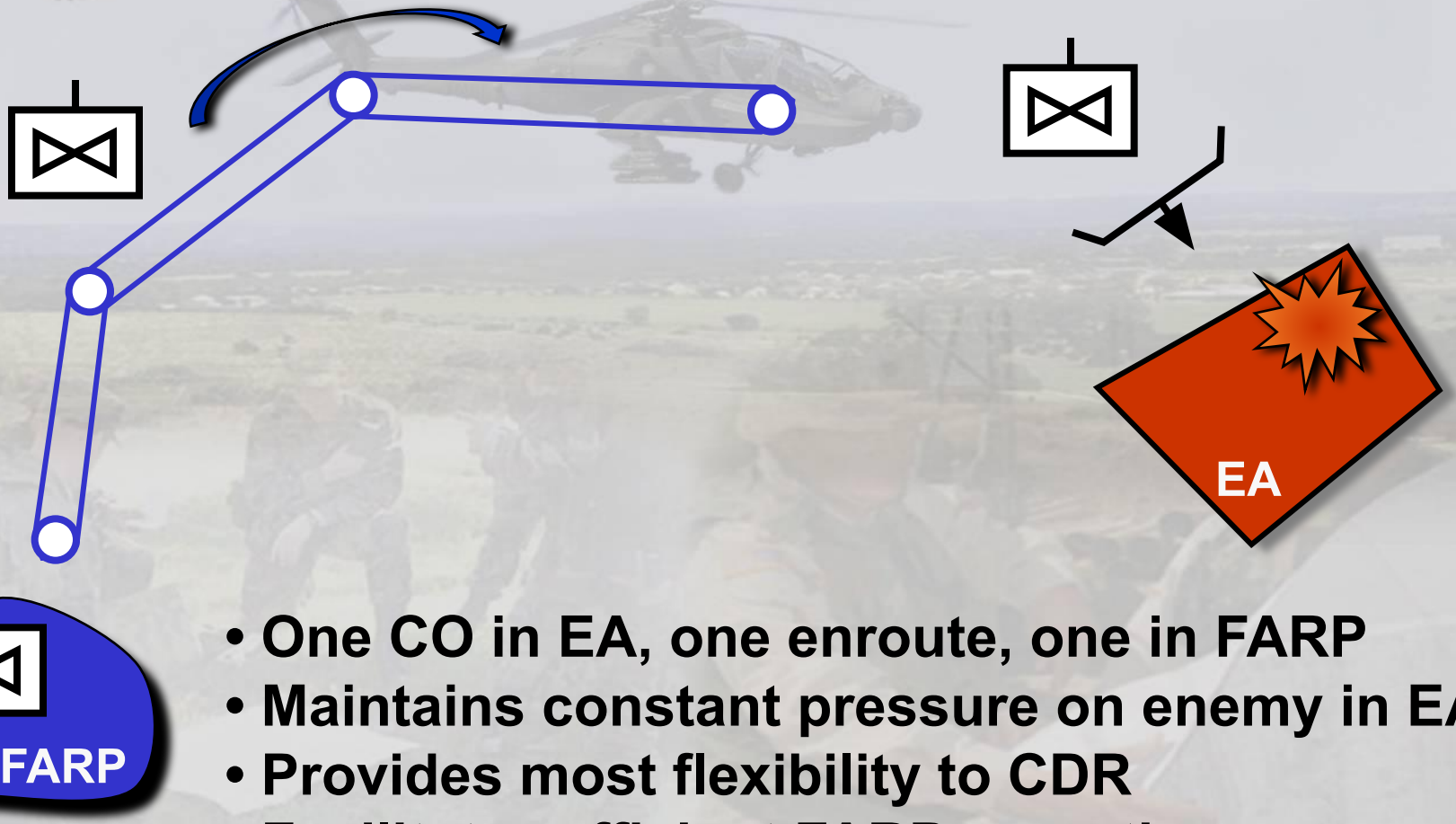
- Area where CDR intends to engage enemy forces
- Employ massed fires of all systems
- Integrated direct and indirect fire plan
- Obstacles used to help shape EA
- Selected after thorough IPB



EMPLOYMENT METHOD

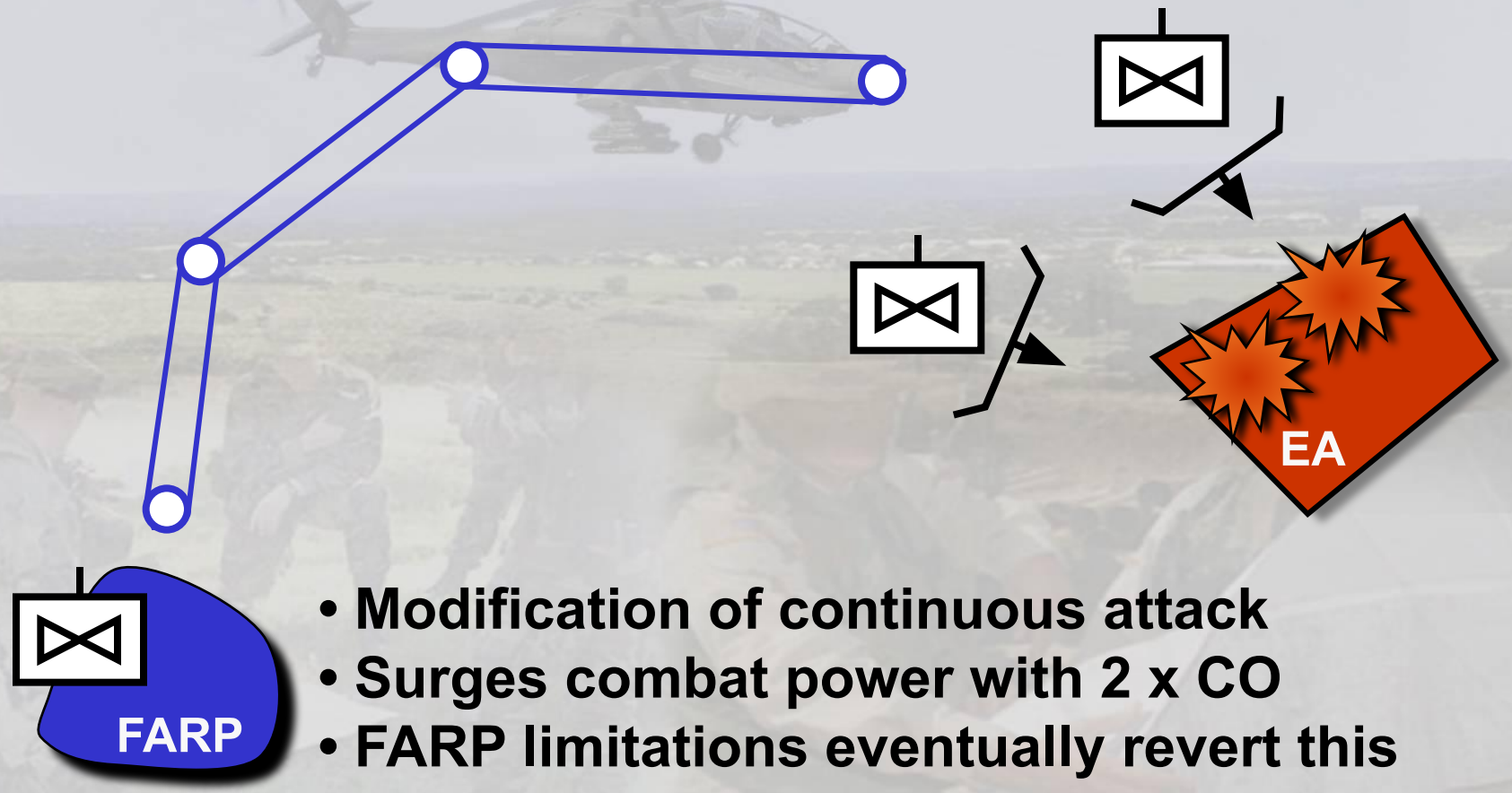
- Continuous
- Phased
- Maximum Destruction

CONTINUOUS ATTACK



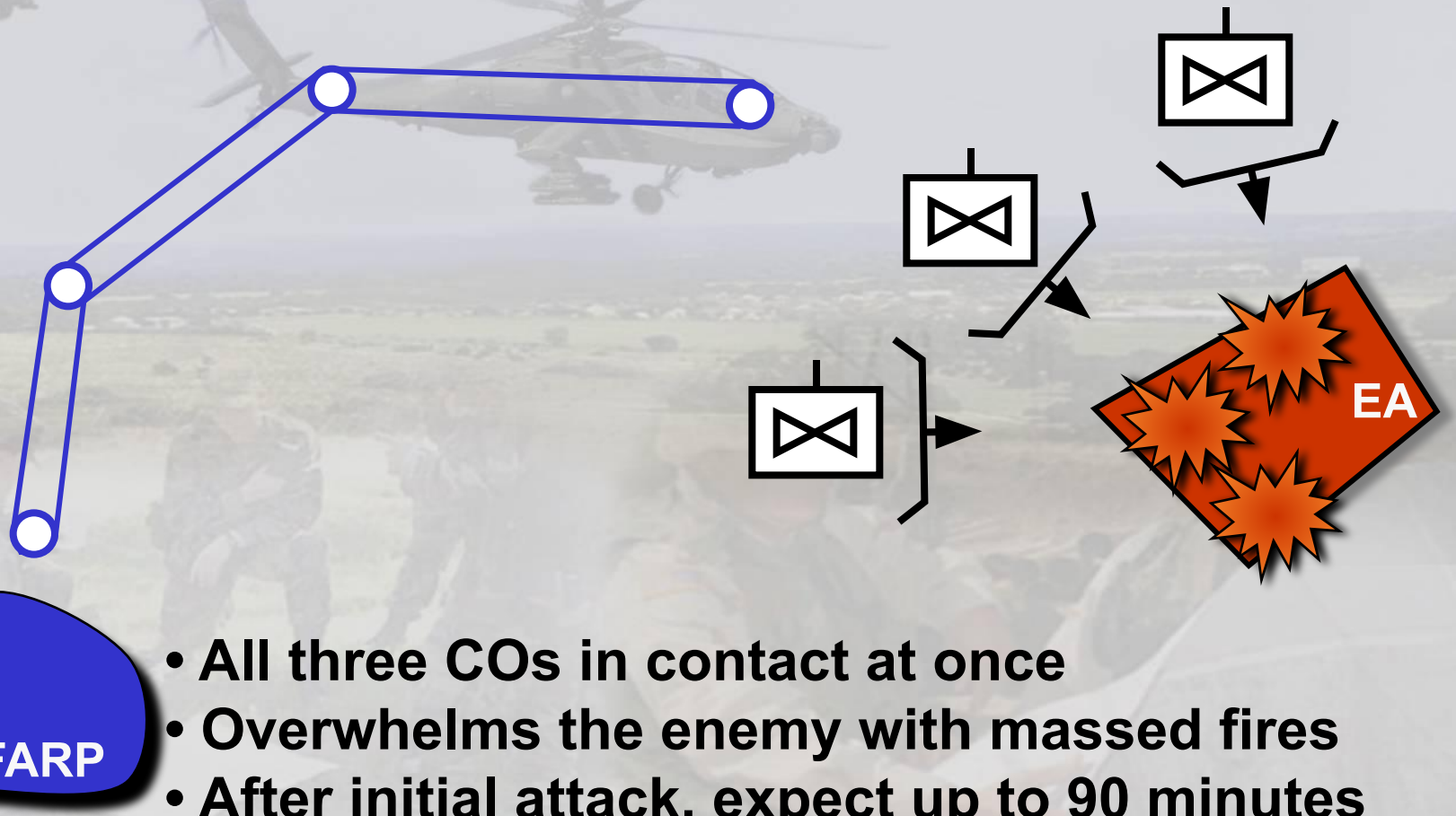
- One CO in EA, one enroute, one in FARP
- Maintains constant pressure on enemy in EA
- Provides most flexibility to CDR
- Facilitates efficient FARP operations

PHASED ATTACK



- Modification of continuous attack
- Surges combat power with 2 x CO
- FARP limitations eventually revert this into continuous attack

MAXIMUM DESTRUCTION ATTACK



- All three COs in contact at once
- Overwhelms the enemy with massed fires
- After initial attack, expect up to 90 minutes to refuel/rearm battalion

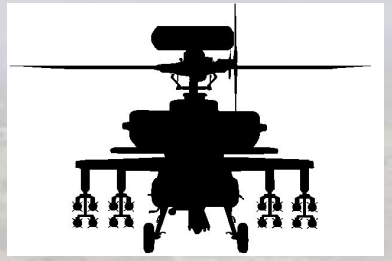
SUCCESS CRITERIA

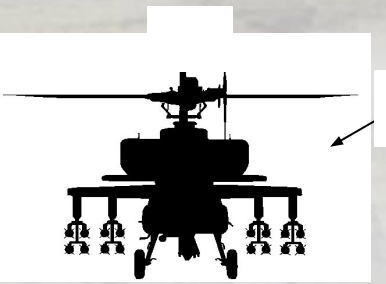
- Attack to Destroy
- Attack to Attrit
- Attack to Delay
- Attack to Disrupt

EMPLOYMENT CONSIDERATIONS

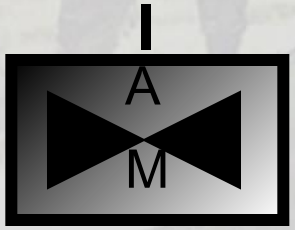
- Fuel (2.5 w/ internals, 3.5 w/ Aux tank)
- Weather (ceilings affect missiles)
- Area vs. Point Target Weapons
- Acquisition vs. Identification
- Can’t see colors, through buildings or through trees
- Target Marking
- Environmental Considerations
- Downed A/C procedures
- ROE (Warning shots – we can’t disable a vehicle…)

EMPLOYMENT TECHNIQUES





150-700 m



x 3/Attack company

- Basic element is the lead-wingman team (does not change unit C2; smallest - limited - is company-level)
- Radar aircraft typically in the lead to develop the situation (based on enemy radar threat)
- 8 aircraft per company, planning for 75% FMC = 6
- We never leave our wingman!

CSS CONSIDERATIONS

- Primary supply considerations: Class III, V, and IX
- FARPs are the primary means of Class III/V distribution
- FARPs critical to Continuous Attack operations
- Aircraft maintenance may significantly affect mission capabilities

OEF/OIF LESSONS LEARNED

- When rotary-wing aircraft are employed in a combined arms role, the pilots need a clear understanding of the ground maneuver plan and more detailed information on what the ground commander requires

- BCTs lack understanding capabilities/limitations of subordinate battalions (i.e.. crew rest, maintenance requirements, and employment considerations)

- Separately planned aviation control measures lead to impaired situational awareness, division of effort and possible fratricide

- Aircrew members execute missions with incomplete BCT maneuver graphics, friendly obstacle plan graphics, fire support plan graphics, and enemy disposition graphics

- Early involvement in planning process will ensure products are delivered to battalions in a timely and accurate fashion

FINAL THOUGHTS

- CSS: If we are working for you count on us asking for space to put down a FARP to increase reaction time…
  - Worst case need space for a FAA preferably with security
- Command and Control: expect we will drop to any net required to get the right picture in our cockpit… that means we will be talking to the element in contact
  - Command relationships should be clearly understood

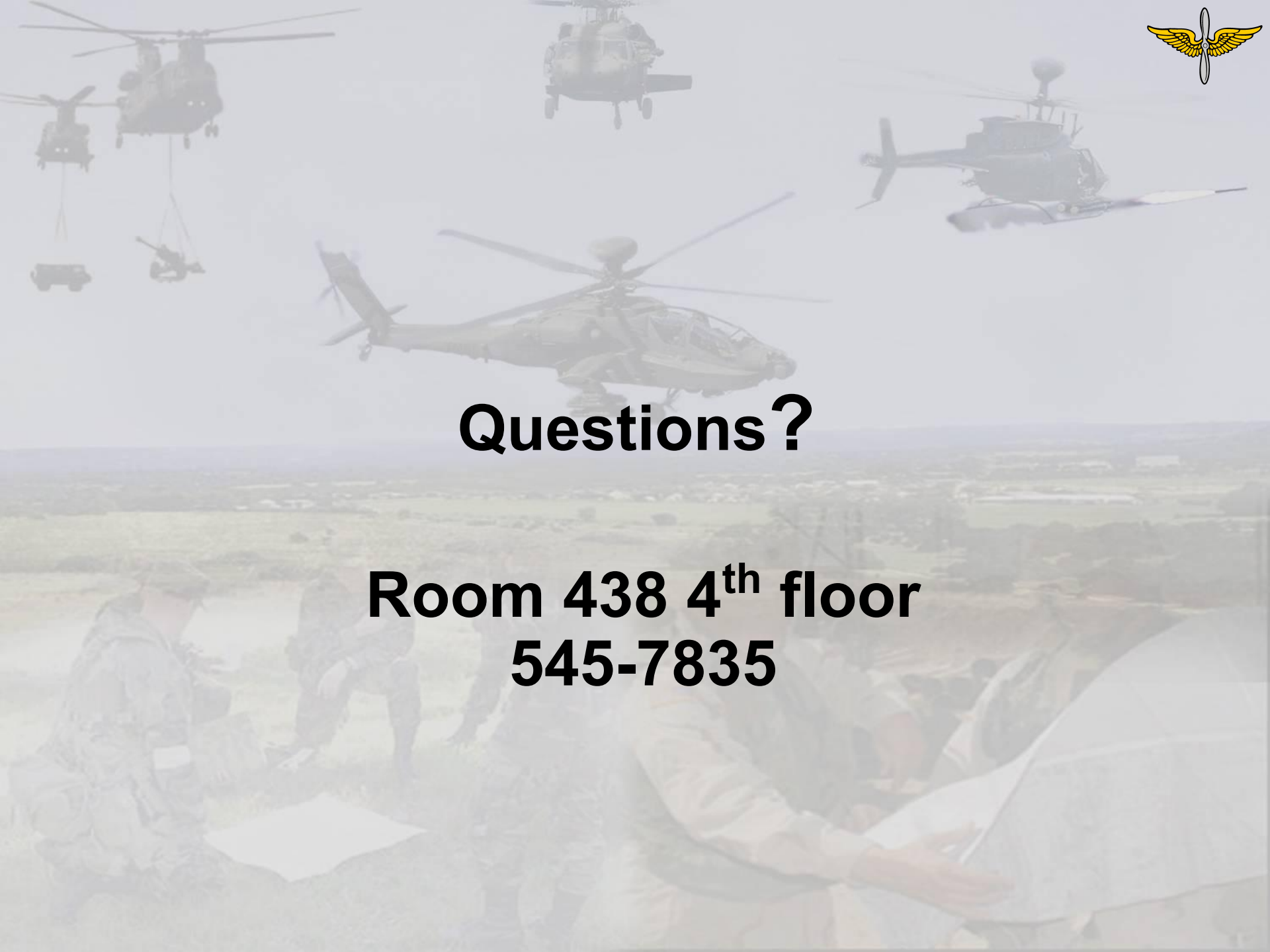
BLUF – we will support whoever and whatever to kill the enemy in order to facilitate the soldier on the ground

ATTACK

“The mission of the attack pilot is to hunt, track, attack and destroy the enemy. Only in this way can a skillful and eager attack pilot display his abilities to the full. Tie him to a narrow and confined task, rob him of his initiative, and you take from him the best and most valuable qualities he possesses…joy of action, aggressive spirit, and the passion of the hunter.”

Unknown Gun Pilot

Attack



Questions?

Room 438 4th floor
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SUMMARY

- TLO: Identify Aviation Operations

- Check on Learning

✔ Types of Aviation Brigades

✔ Critical information required for a CCA

✔ Types of employment methods of attack helicopters