



**JTRS**

**HAND HELD /  
SMALL FORM  
FIT**

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# Mortar Fire Control System – Light (OV-1)

(120MM Mortar Firing Precision Guided Mortar Munitions)

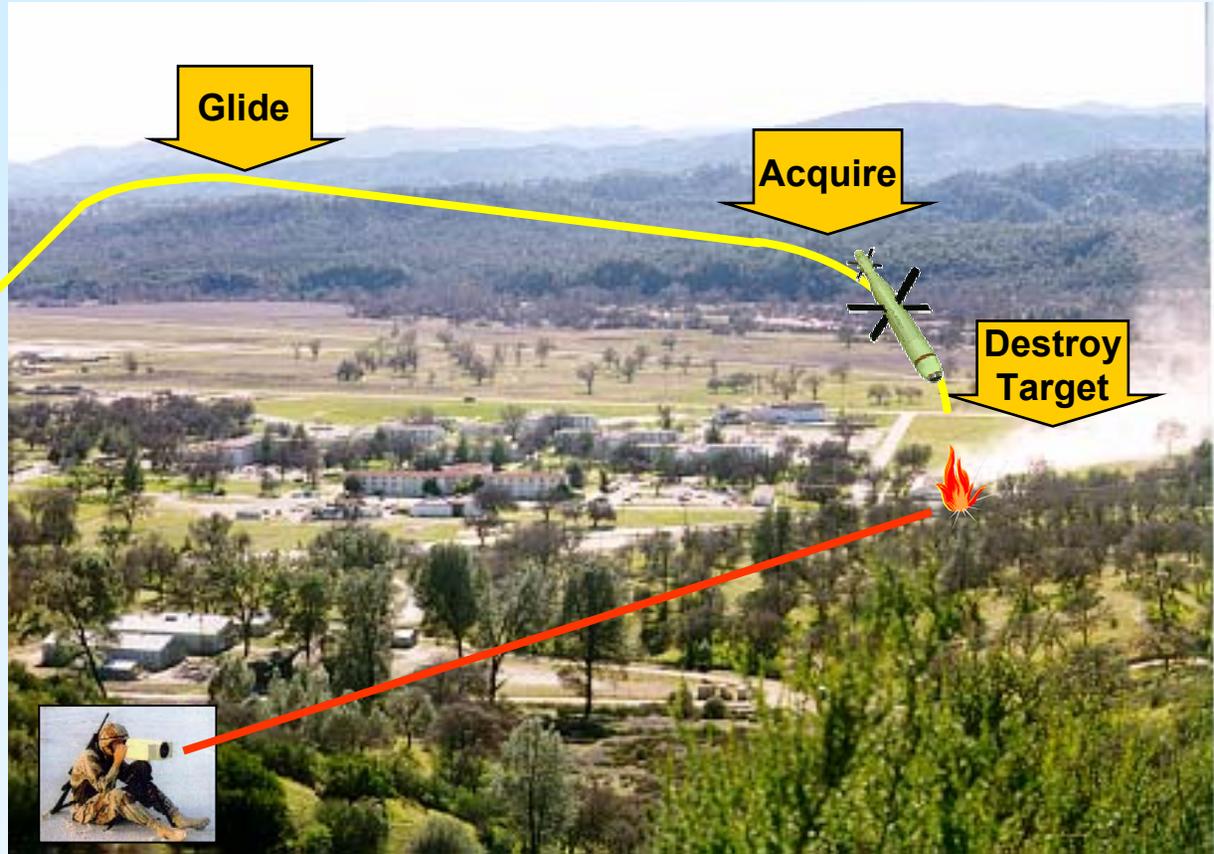


## Operational Concept

### Airborne/Air Assault (Legacy)



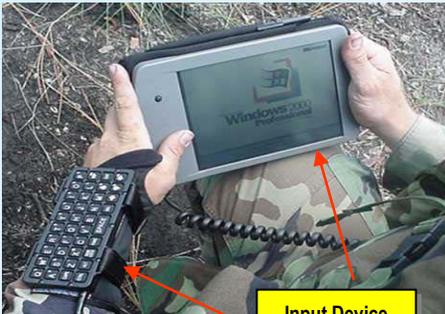
Pointing Device  
3-5 Pounds



Glide

Acquire

Destroy  
Target



Input Device  
Squad Leader



Comm/Nav Box  
Windows CE

Computer Box  
Windows 2000

- MFCS-L is for non-mechanized forces
- Command & Control – Interfaces with AFATDS/FBCB2
- Allows direct sensor-shooter control link
- Integrated system:
  - Ballistic calculation
  - Positioning
  - Pointing
  - FBCB2 “Look and Feel”
  - Fire control network



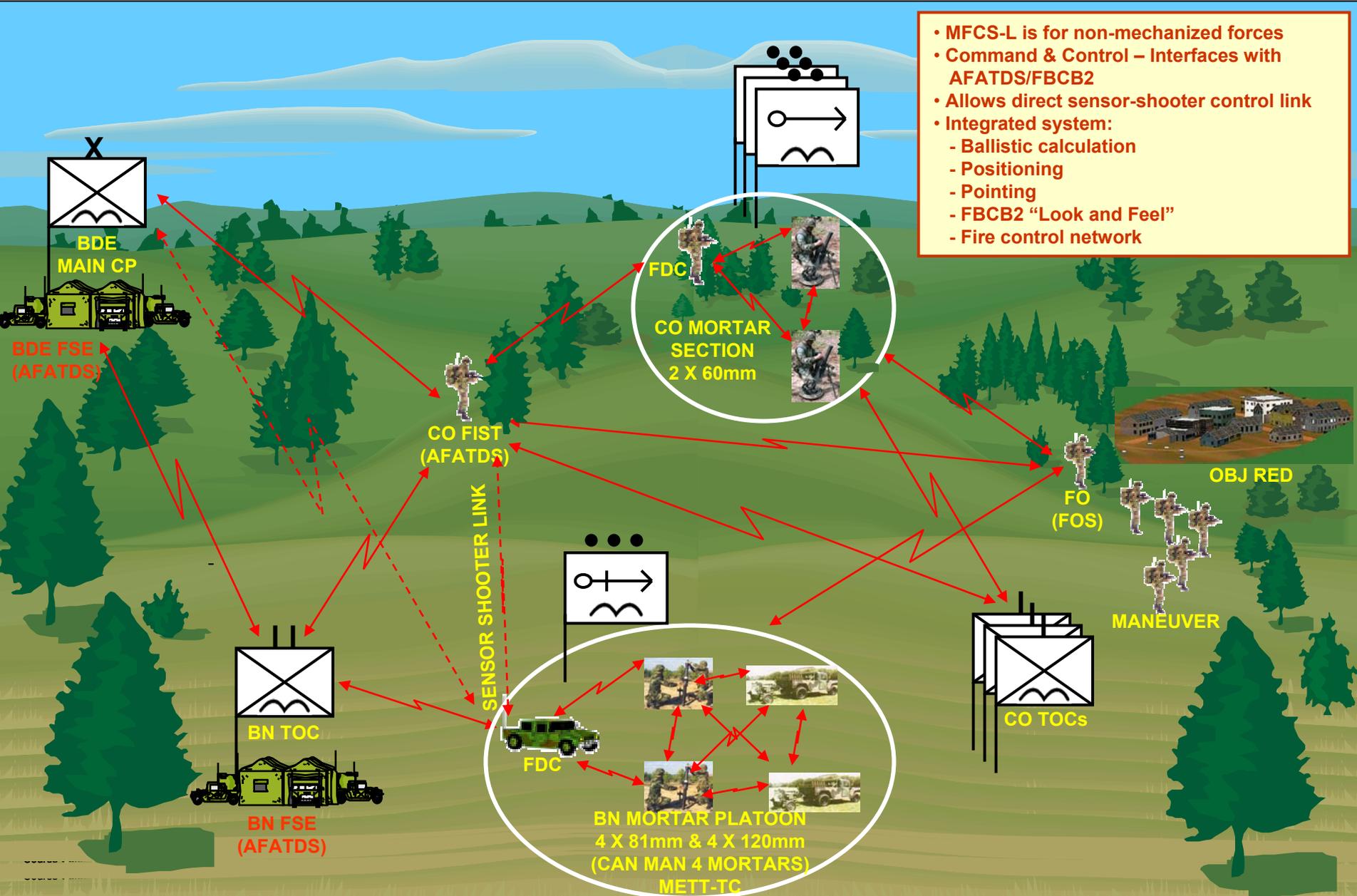
# Mortar Fire Control System – Light (OV-1)

## Operational Concept

### Airborne/Air Assault/Light (Legacy)



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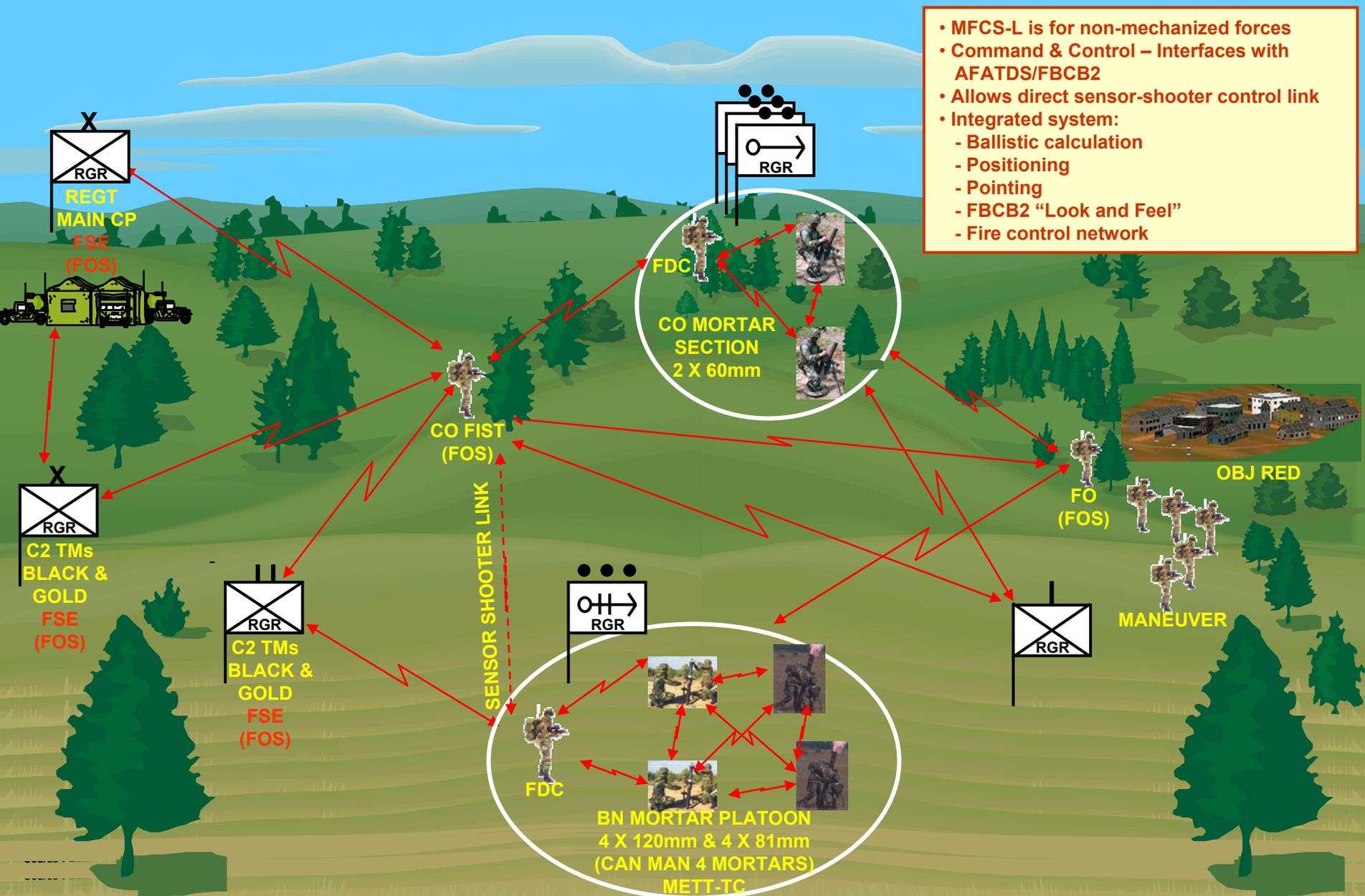
# Mortar Fire Control System – Light (OV-1)

## Operational Concept

### 75th Ranger Regiment



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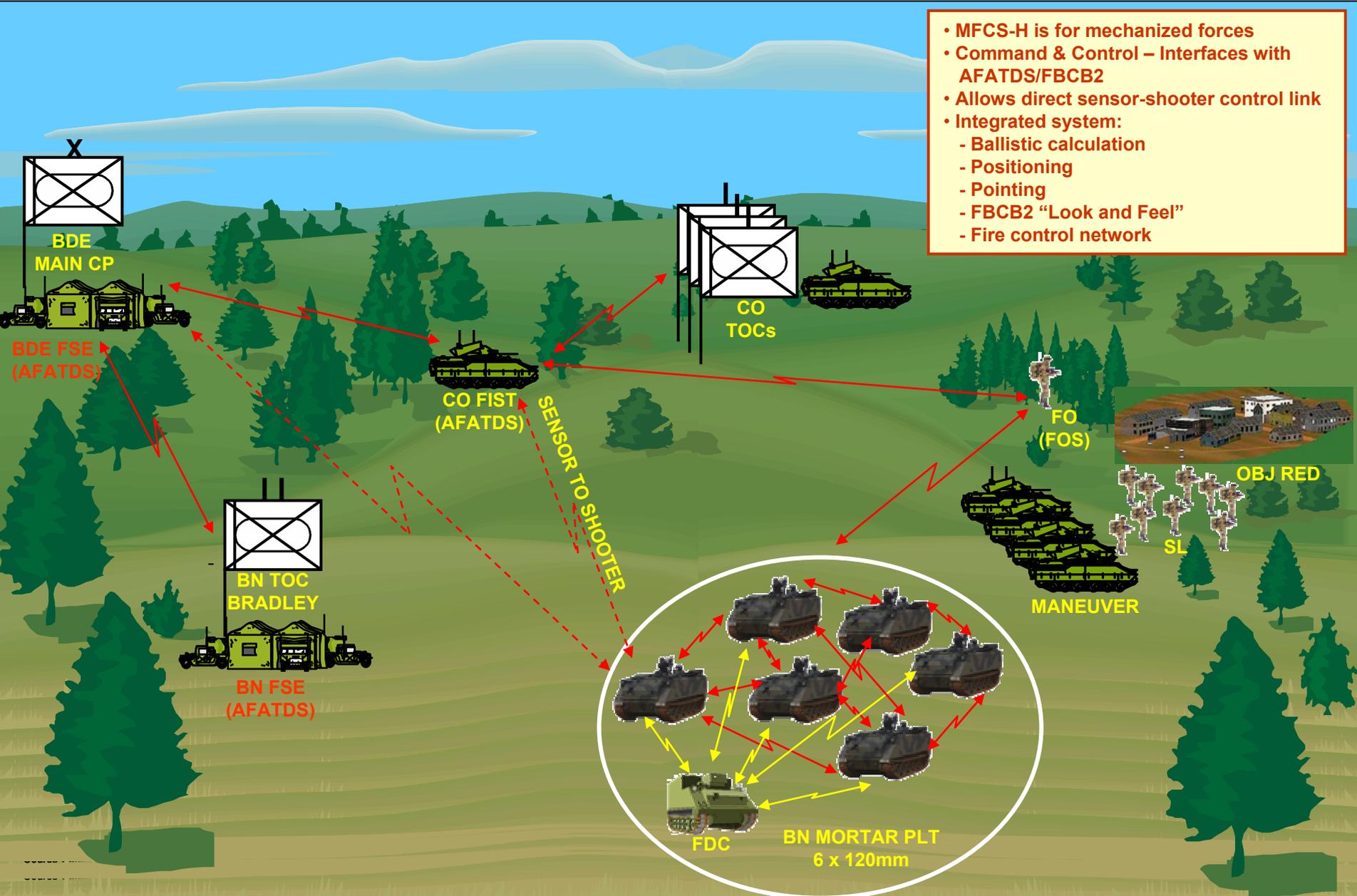
# Mortar Fire Control System – Heavy (OV-1)

## Operational Concept

### Mechanized (Legacy)



- MFCS-H is for mechanized forces
- Command & Control – Interfaces with AFATDS/FBCB2
- Allows direct sensor-shooter control link
- Integrated system:
  - Ballistic calculation
  - Positioning
  - Pointing
  - FBCB2 “Look and Feel”
  - Fire control network





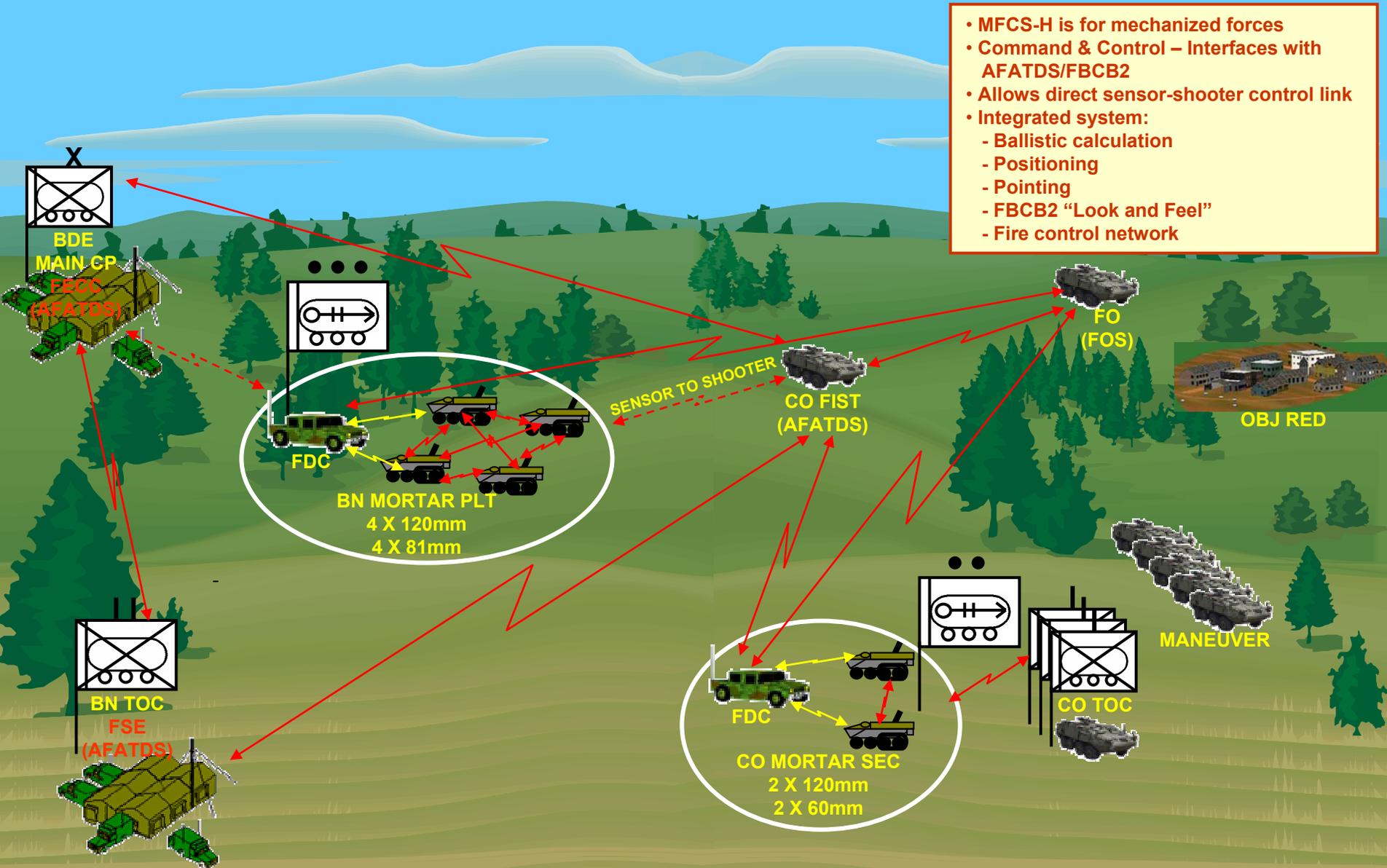
# Mortar Fire Control System – Heavy (OV-1)

## Operational Concept

### Stryker Brigade Combat Team



- MFCS-H is for mechanized forces
- Command & Control – Interfaces with AFATDS/FBCB2
- Allows direct sensor-shooter control link
- Integrated system:
  - Ballistic calculation
  - Positioning
  - Pointing
  - FBCB2 “Look and Feel”
  - Fire control network

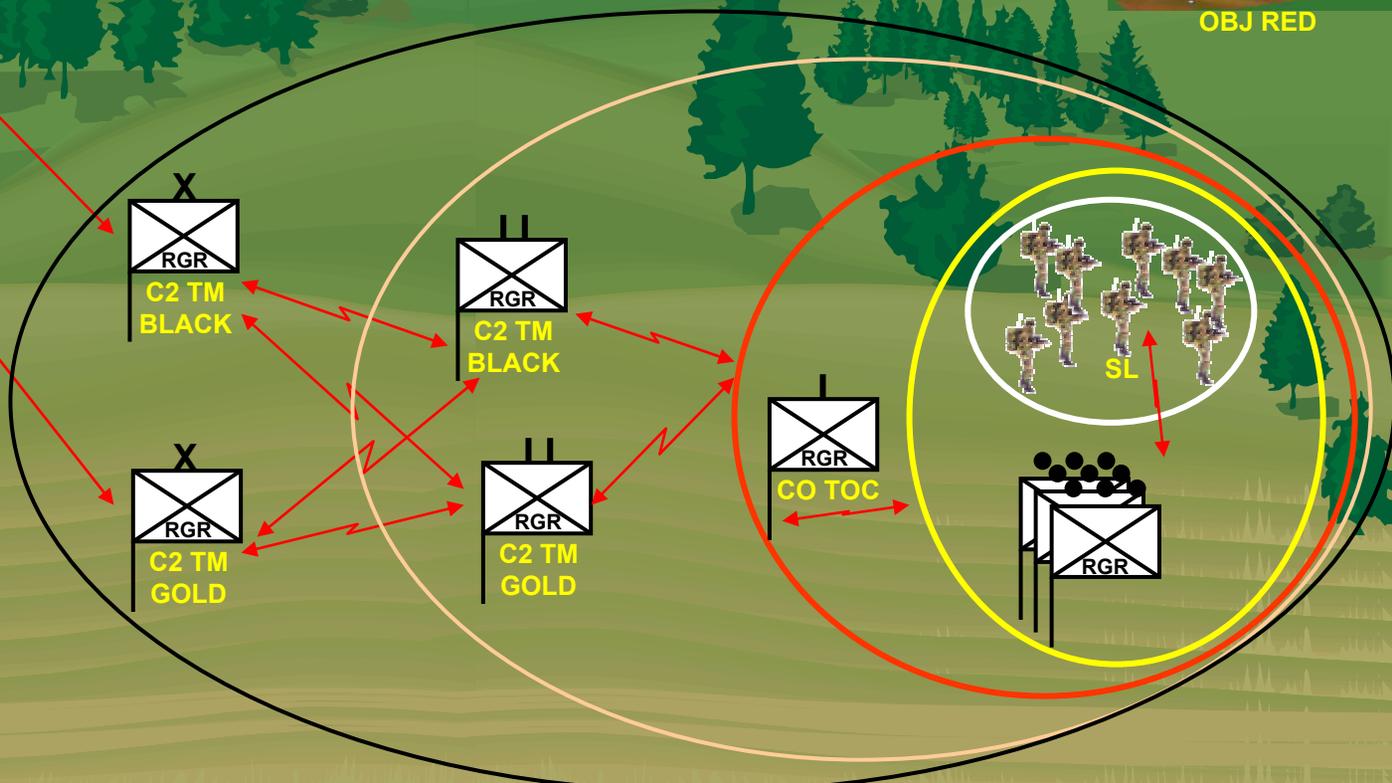
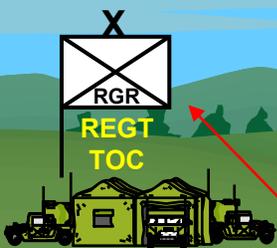




# Land Warrior – Block I (OV-1) Operational Concept 75<sup>th</sup> Ranger Regiment



- Enable small Infantry units, leaders, and individuals improved tactical (situational) awareness.
- Able to share information both vertically and horizontally to feed the common operational picture (COP).
- Small units become a system of systems (weapons, sensors, communications).
- No communications with FBCB2.



OBJ RED



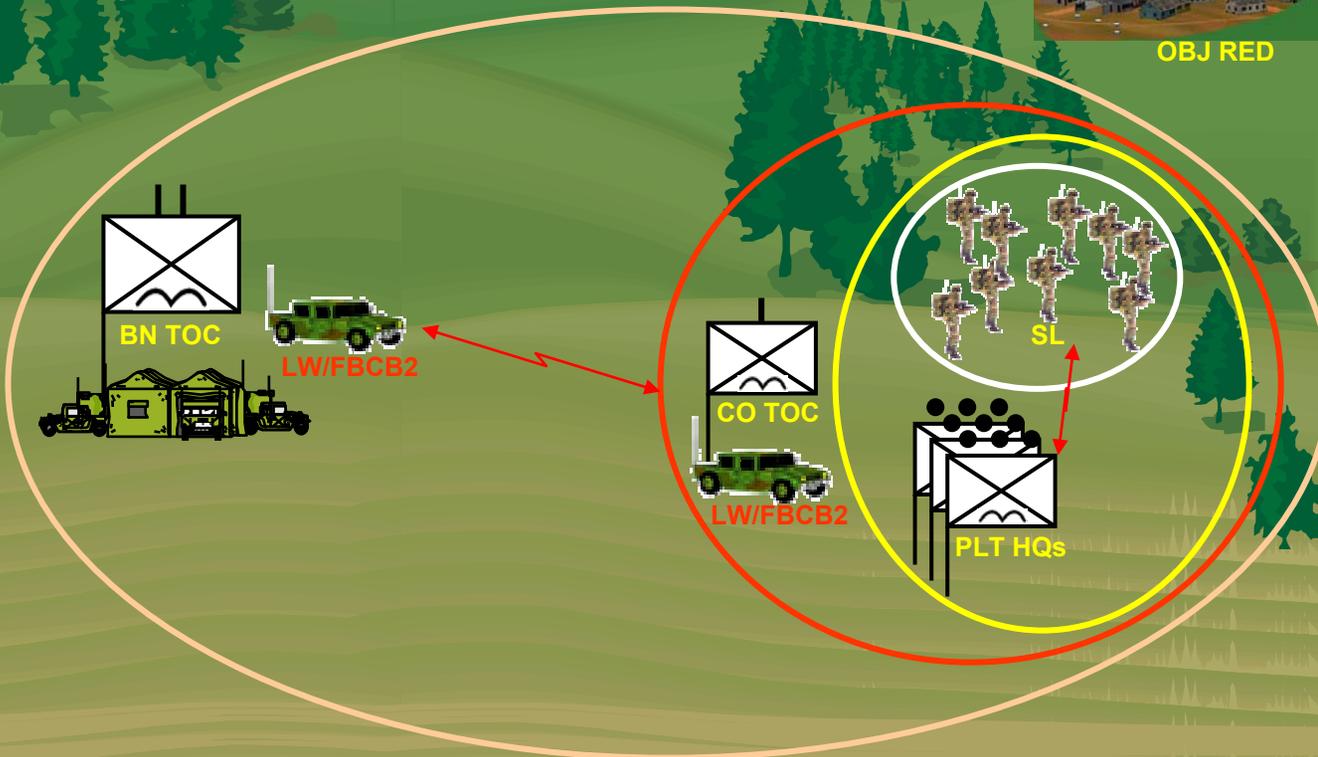
# Land Warrior – Block II (OV-1) Operational Concept Airborne/Air Assault/Light (Legacy)



- Enable small Infantry units, leaders, and individuals improved tactical (situational) awareness.
- Able to share information both vertically and horizontally to feed the common operational picture (COP).
- Small units become a system of systems (weapons, sensors, communications).
- Able to feed FBCB2



**OBJ RED**



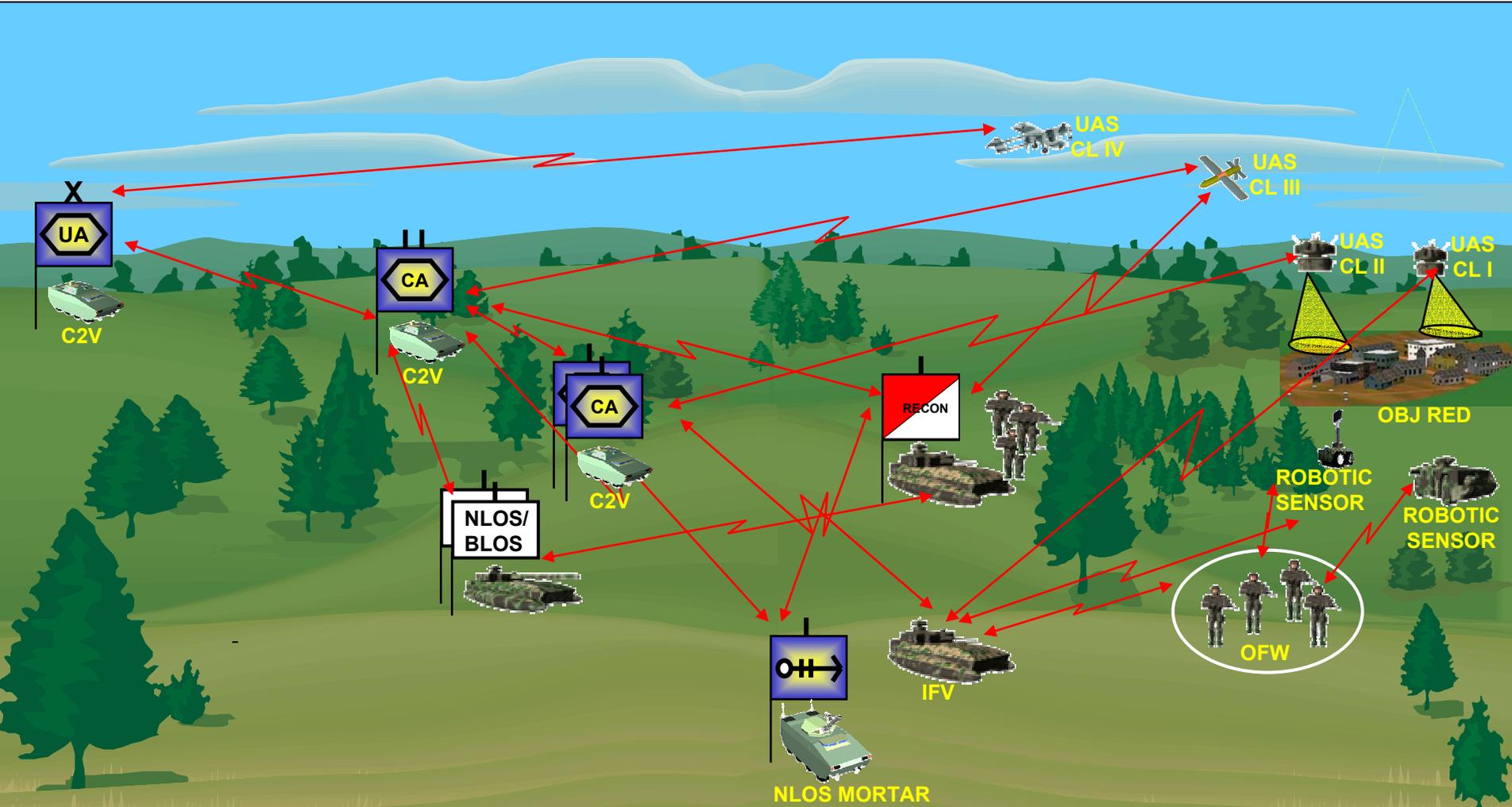




# Objective Force Warrior (OV-1)

## Operational Concept

### Unit of Action (UA)



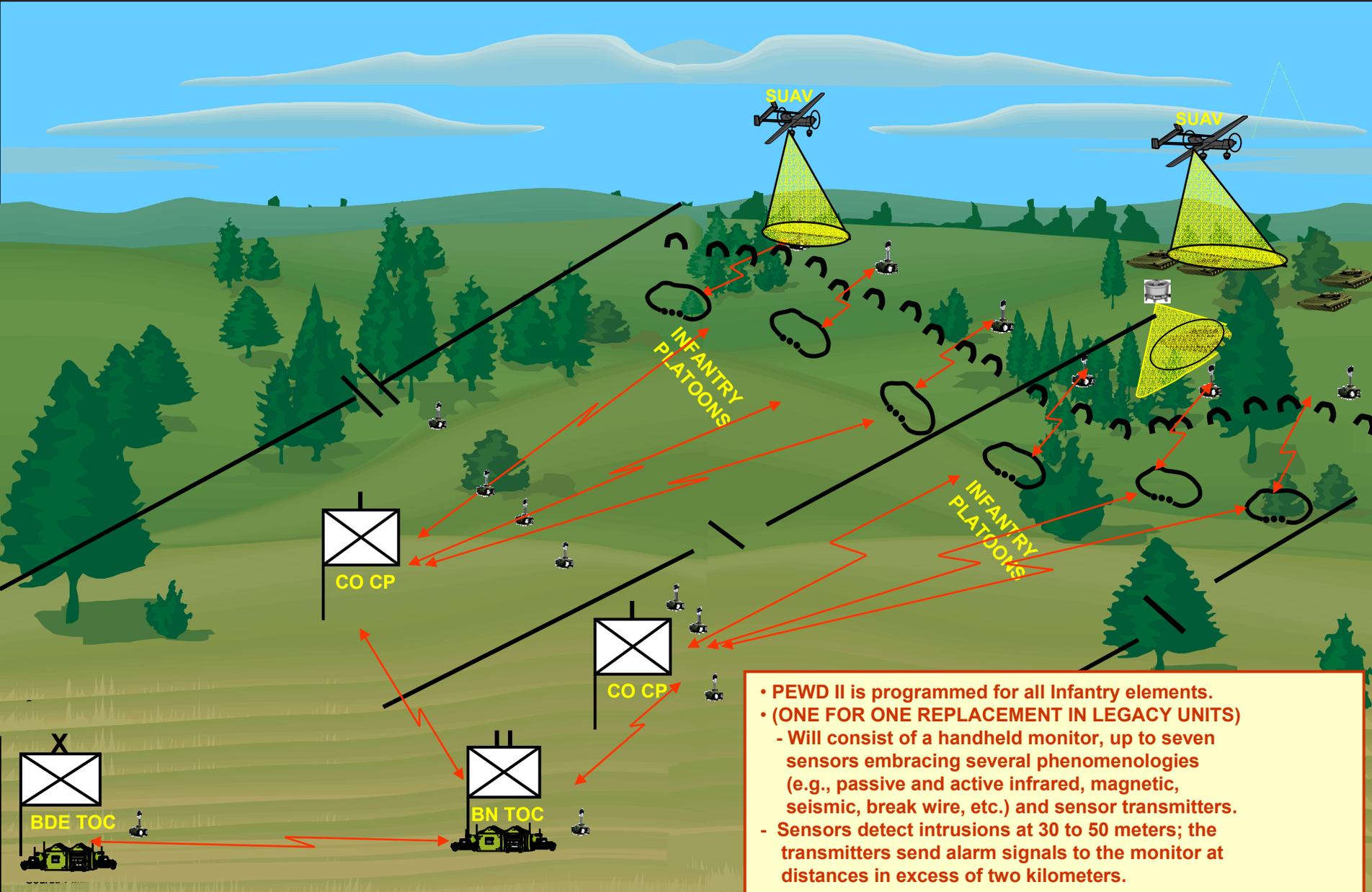
- OFW is a major pillar of the Objective Force strategy, complementing the Future Combat Systems (FCS) program.
- OFW notional concepts seek to create a lightweight overwhelmingly lethal, fully integrated individual protection, netted communications, soldier worn power sources, and enhanced human performance.
- Netted OFW small unit/teams with robust team communications, state-of-the-art distributed and fused sensors, organic tactical intelligence collection assets, enhanced situational understanding, embedded training, on-the-move planning, and linkage to other force assets.
- Unconstrained vertical and lateral movement at full up combat/assault capability during mission execution. Optimized cognitive and physical fightability, on-board physiological/medical sensor suite with enhanced prompt casualty care.

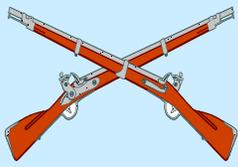


# Platoon Early Warning Device (PEWD II) (OV-1) Legacy and Stryker



## Operational Concept





# RATIONALE STRYKER



- Bn TOCs:  
(1 per TOC)
  - Limited manpower. Assists in security of the TOC.
  - Increases security and survivability.
- Reconnaissance Platoon:  
(1 per squad)
  - Recon squads work independently from each other.
  - PEWD II increases security and survivability for the Interim Armored Vehicle (IAV) when teams are deployed.
- Rifle Company:  
Headquarters  
Rifle & MGS Platoons  
(1 per platoon)  
(W/ additional sensors)
  - Use as initial security or supports company's main effort
  - IAVs are responsible for twice the distance to their front than a Light Infantry counterpart.
  - Increases security and survivability.
- Anti-Tank Company:  
AT Platoons  
(1 per platoon)  
(W/ additional sensors)
  - AT Sections work independently from each other.
  - Operate in front of the main force.

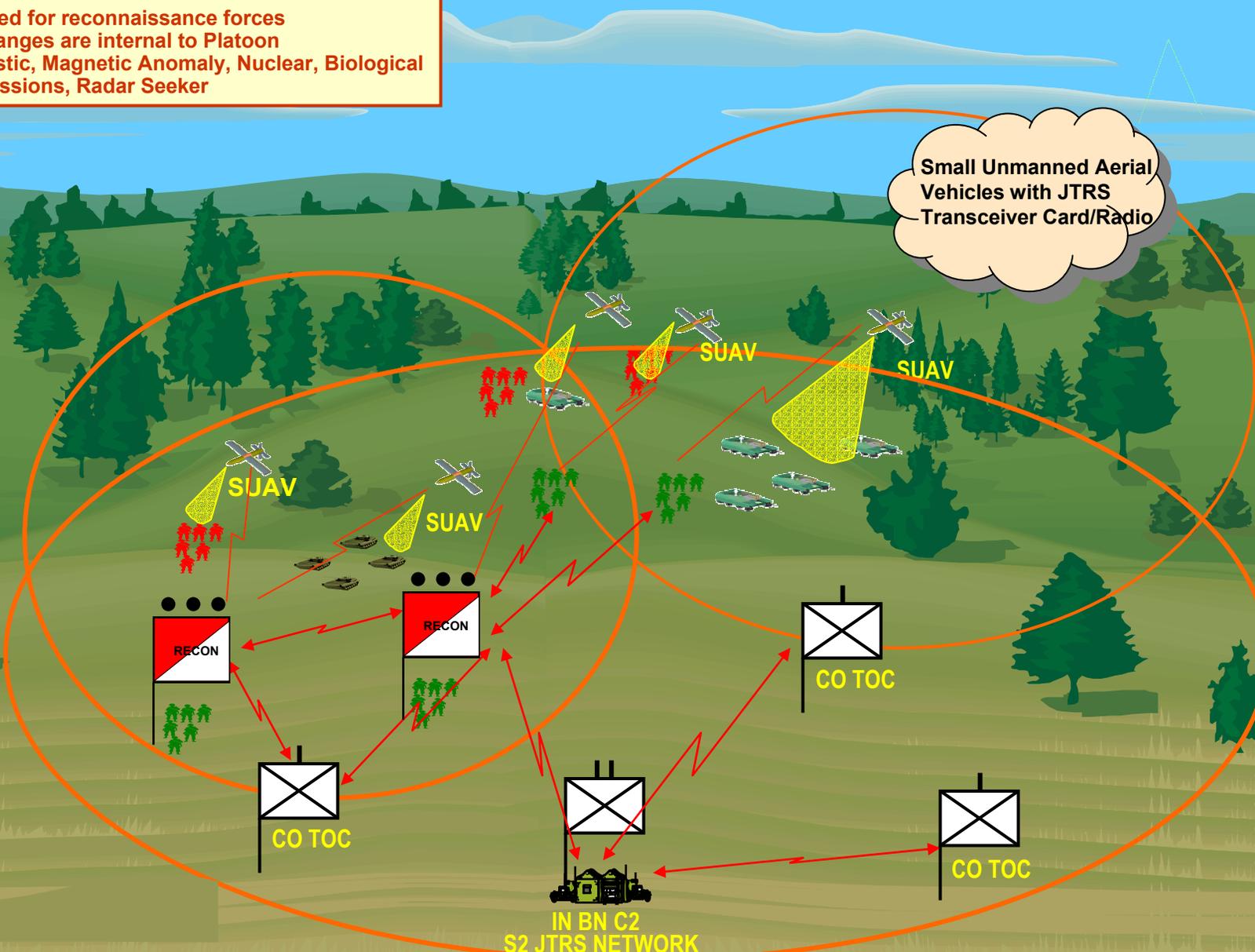


# Small Unmanned Air Vehicle (SUAV) (OV-1) Legacy (RECON elements only) Airborne/Air Assault/Light and Heavy (MECH) Operational Concept (OV-1)



- SUAV is programmed for reconnaissance forces
  - Information Exchanges are internal to Platoon
  - Laser Des, (Acoustic, Magnetic Anomaly, Nuclear, Biological Chemical, RF Emissions, Radar Seeker)

Small Unmanned Aerial Vehicles with JTRS Transceiver Card/Radio



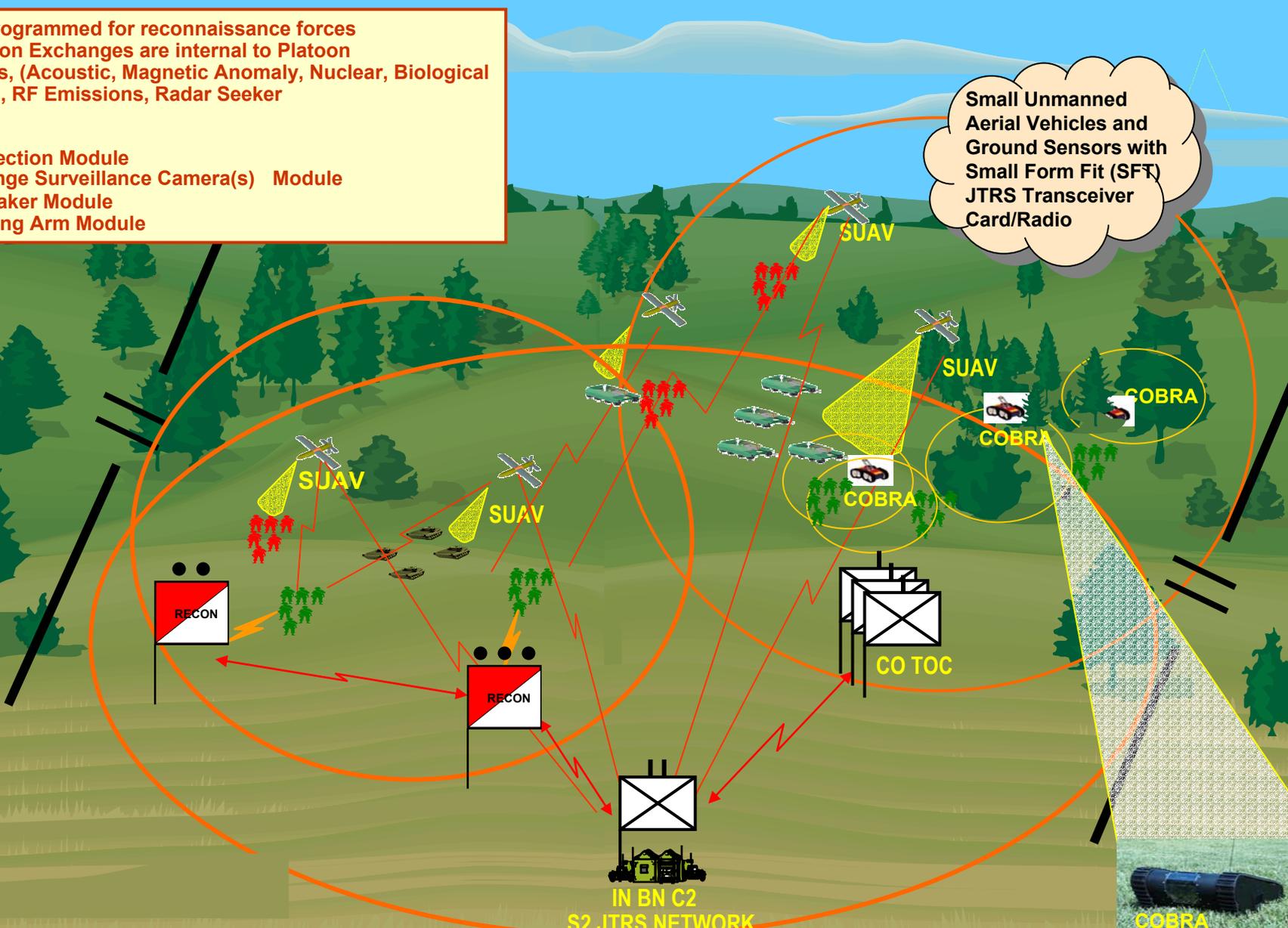
IN BN C2  
S2 JTRS NETWORK



# Small Unmanned Air Vehicle (SUAV) and Combined Operations Battlefield Asset (COBRA) (OV-1) Airborne/Air Assault/Light and Heavy (MECH) (Legacy) Operational Concept

- SUAV is programmed for reconnaissance forces
  - Information Exchanges are internal to Platoon
  - Laser Des, (Acoustic, Magnetic Anomaly, Nuclear, Biological Chemical, RF Emissions, Radar Seeker)
- COBRA
  - NBC Detection Module
  - Long Range Surveillance Camera(s) Module
  - Loudspeaker Module
  - Articulating Arm Module

Small Unmanned Aerial Vehicles and Ground Sensors with Small Form Fit (SFT) JTRS Transceiver Card/Radio



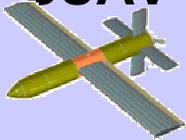


## SMALL UNIT AERIAL VEHICLE (SUAV) and Combined Operations Battlefield Asset (COBRA)



### *Requirements and Capabilities*

#### **SUAV**



- Primary: Agile EO/IR (320x240) (w/laser RF)
- Possible Block I: Laser Des, JIGSAW, MASINT (Acoustic, Magnetic Anomaly, Nuclear, Biological, Chemical, RF Emission), Seeker Radar

### **COMBINED OPERATIONS BATTLEFIELD ROBOTIC ASSET (COBRA)**



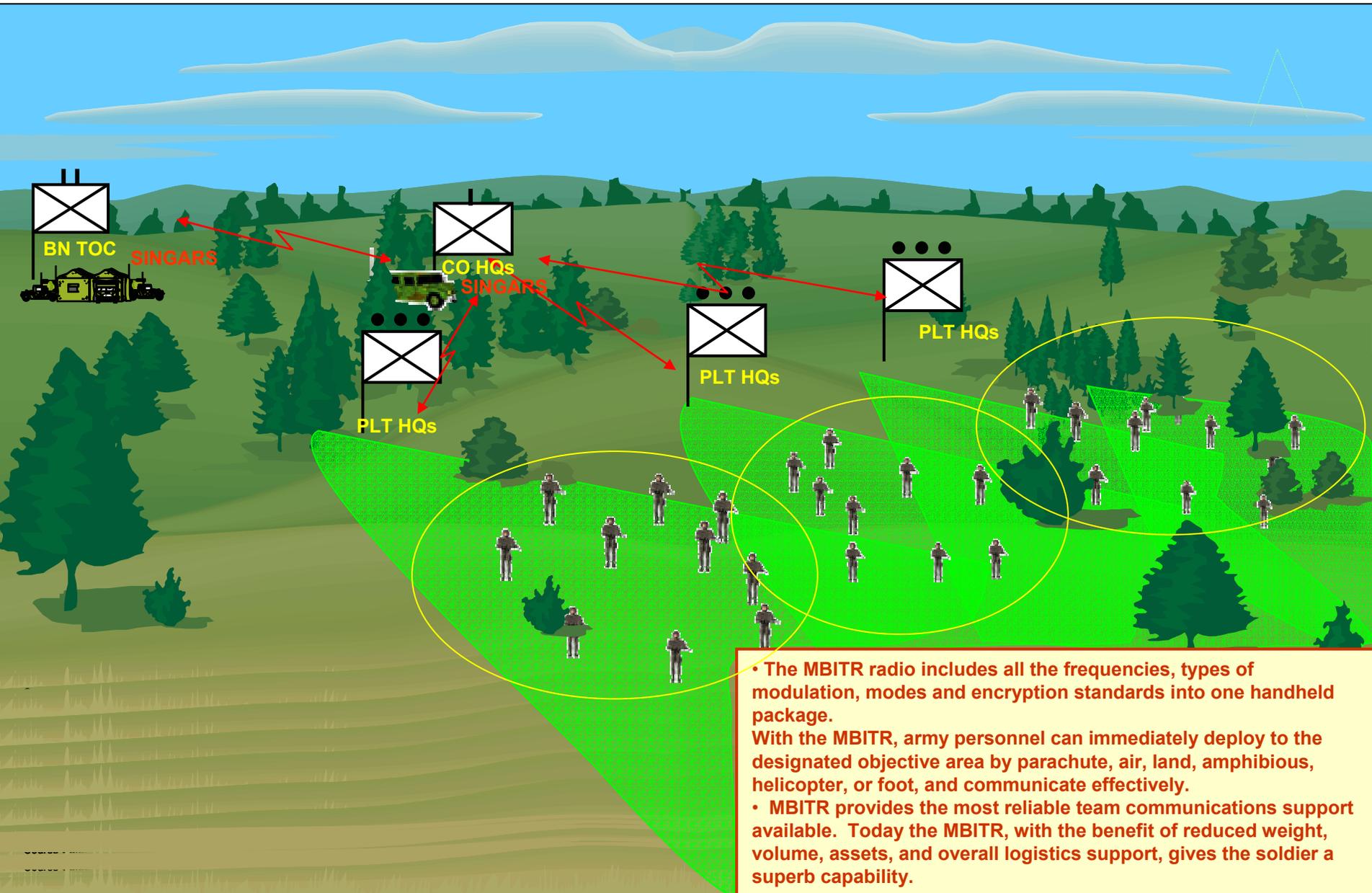
The COBRA will be a miniature robot system. Operating semi-autonomously and equipped with an array of payloads/mission modules, it will be capable of performing numerous tasks in urban and subterranean environments, with a high degree of mobility and agility. Using various sensors, the COBRA will enable units to remotely investigate obstacles, passageways, structures and terrain, while reducing/avoiding Soldier exposure. Other sensing devices will afford the user a remote chemical, biological, radiological, nuclear/hazardous material (CBRN/HAZMAT) monitoring capability. The system will also provide a long-range surveillance capability (using current cameras) and enable operators to remotely position, retrieve, and manipulate selected items (E.g., mines, demolitions, etc.)



# AN/PRC-148 AND AN/PRC-126 (OV-1) Platoon/Squad Radios (Legacy)



## Operational Concept



• The MBITR radio includes all the frequencies, types of modulation, modes and encryption standards into one handheld package. With the MBITR, army personnel can immediately deploy to the designated objective area by parachute, air, land, amphibious, helicopter, or foot, and communicate effectively.

• MBITR provides the most reliable team communications support available. Today the MBITR, with the benefit of reduced weight, volume, assets, and overall logistics support, gives the soldier a superb capability.