



Focused Knowledge to the Warfighter

9th International Command and Control Research and Technology Symposium

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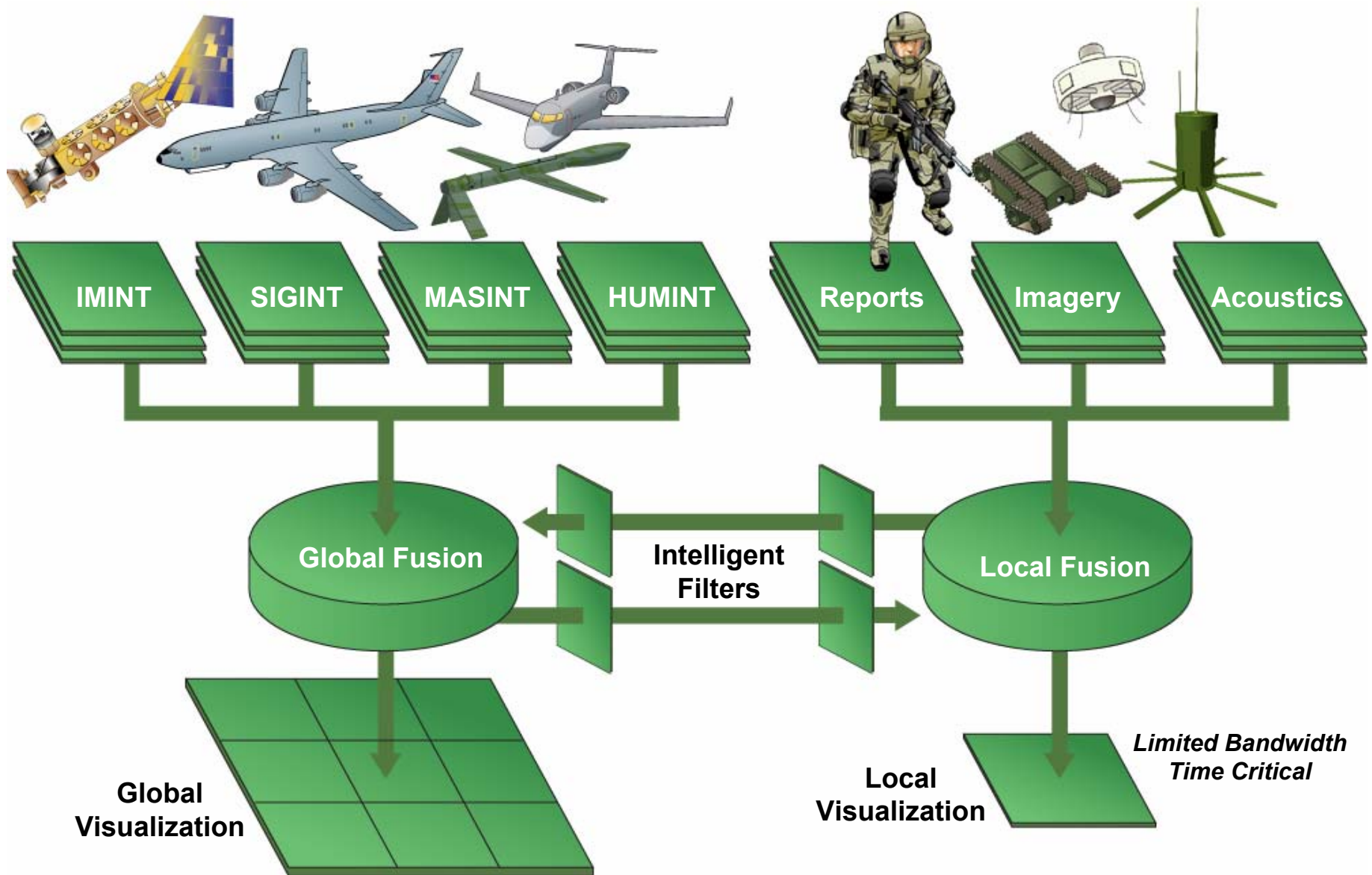
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*Focused Knowledge to the
Warfighter*

*Increased mission effectiveness
and survivability for dismounted infantry*

Global/Local Interactions



Enhanced Situational Awareness and Action

Warrior's Edge Information Transactions

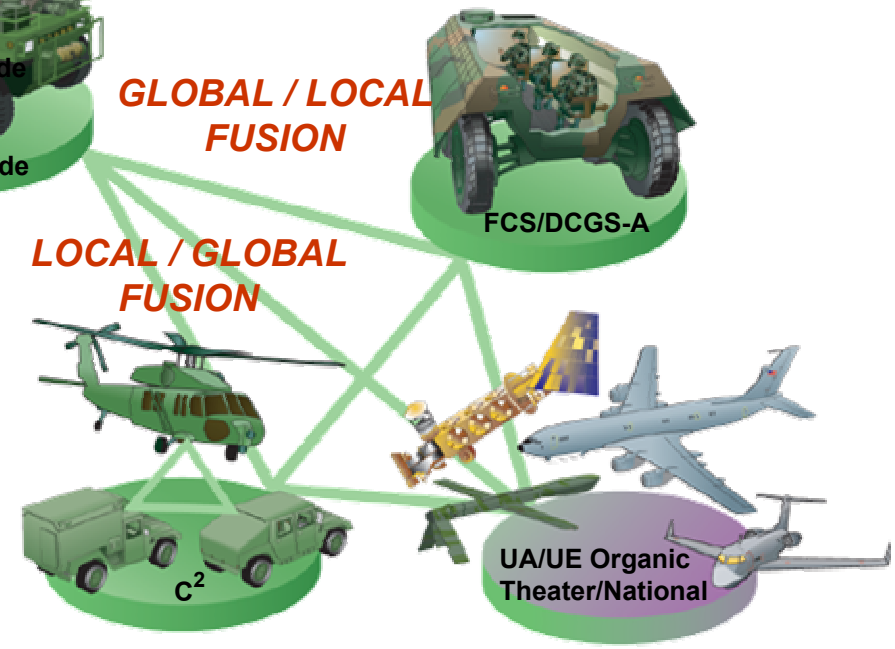
Local (Dismounted) Fusion

- Local node subscribes to information from global node
- Local node fuses global information with their organic sensor data to develop better Situational Awareness
- Local node publishes critical information for global node
- Local node has similar interactions with adjacent local nodes



Global (UA/UE) Fusion

- Global node publishes information relevant to the needs of the local node
- Global node fuses filtered information subscribed from local node



Local Fusion Node Functionality

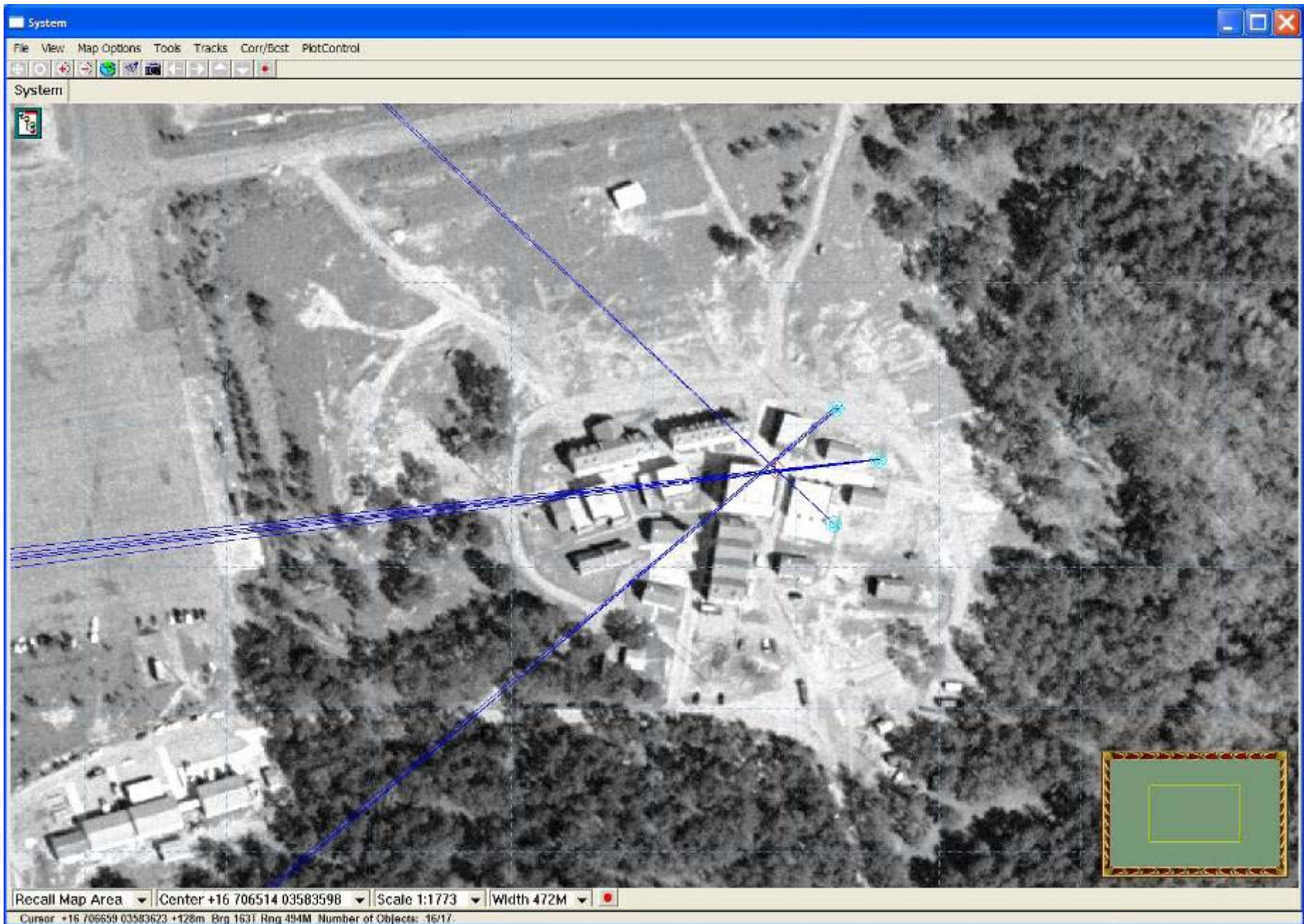
- Multiple Hypothesis Trackers
- Local/Global Fusion
- Terrain Analysis
- Cross Sensor Cueing
 - Between Local/Global Assets
 - Between Organic Sensors
- Information Kiosk, Visualization
- Archive and Playback
- Training
- Pattern Analysis
- Planning/Control for Organic Sensors
- Video Mosaicing and differencing
- Language Translation
- Communications Relay
 - Local Node
 - To Global Fusion Node
 - To Other Local Nodes



Acoustic Sensor Testbed



Gunshot Localization



UGS

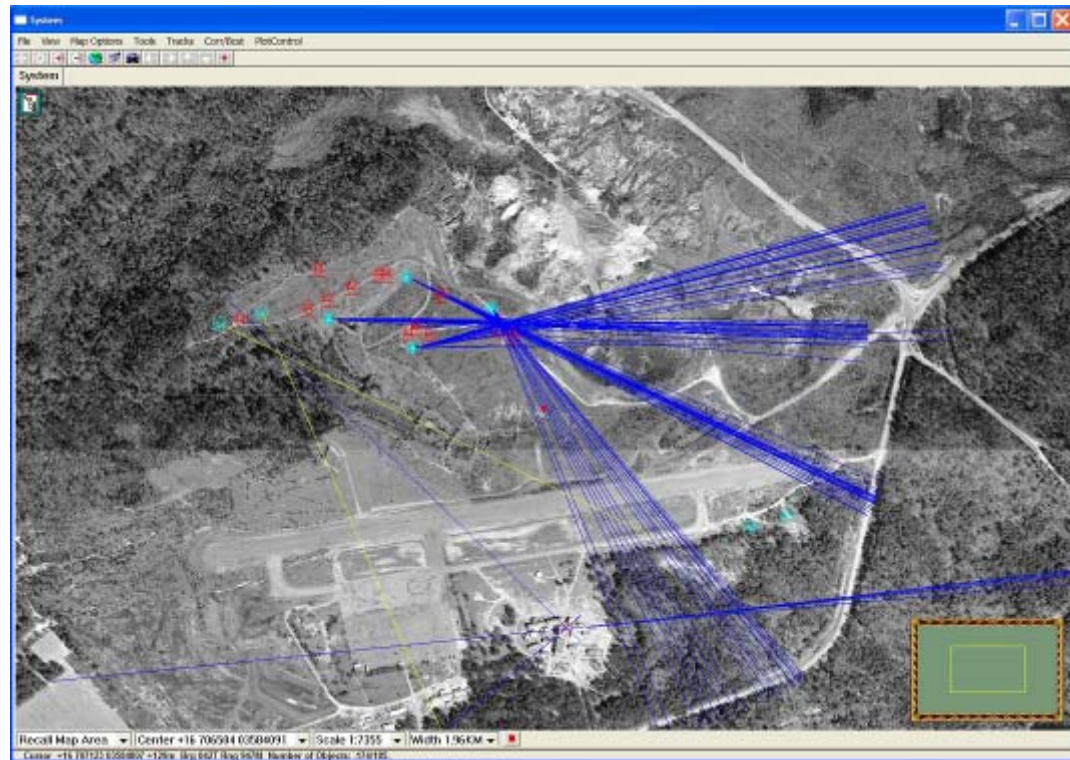
Unattended Ground Sensors



*Acoustic
Array*

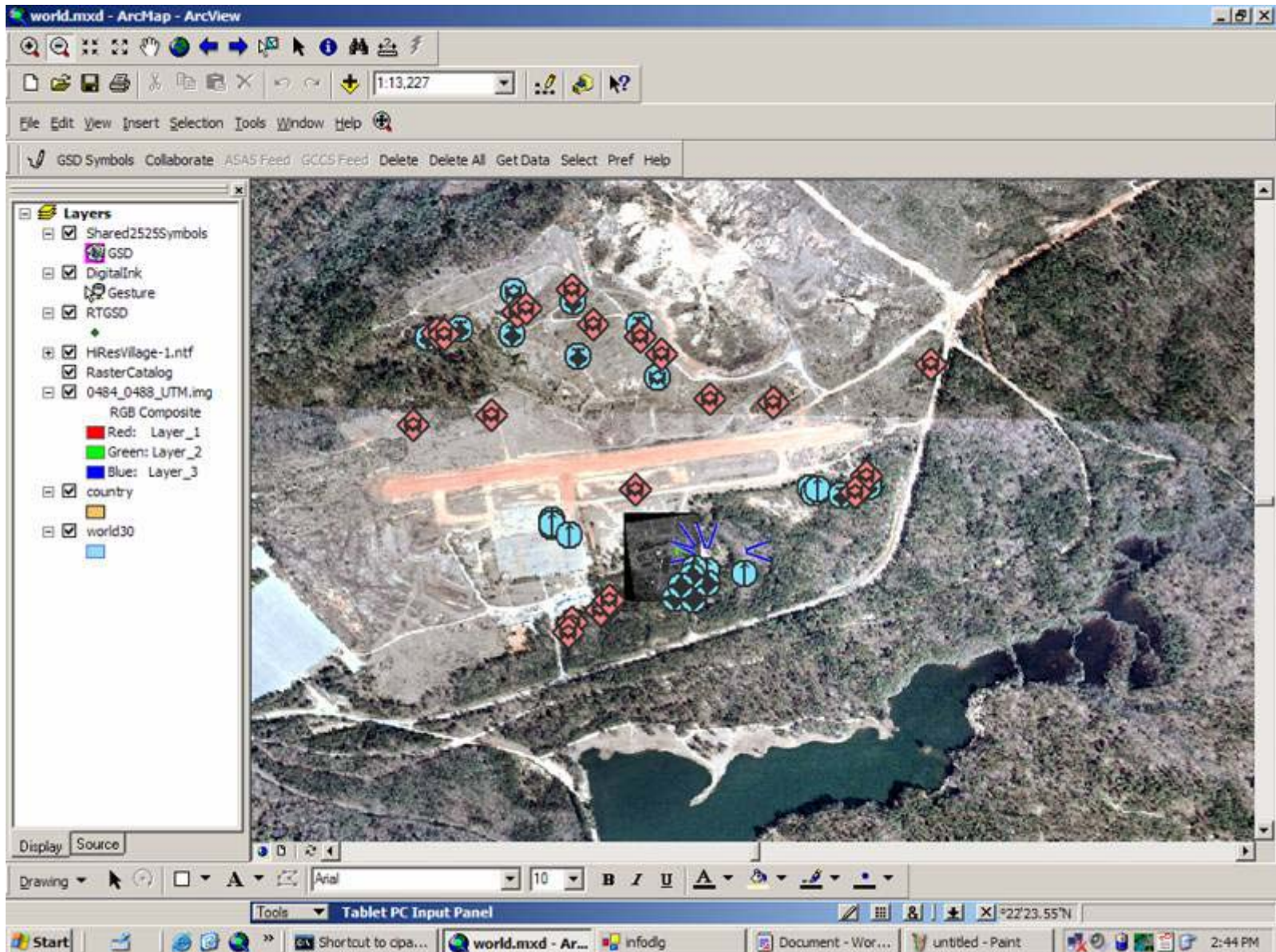


IR Tripwire

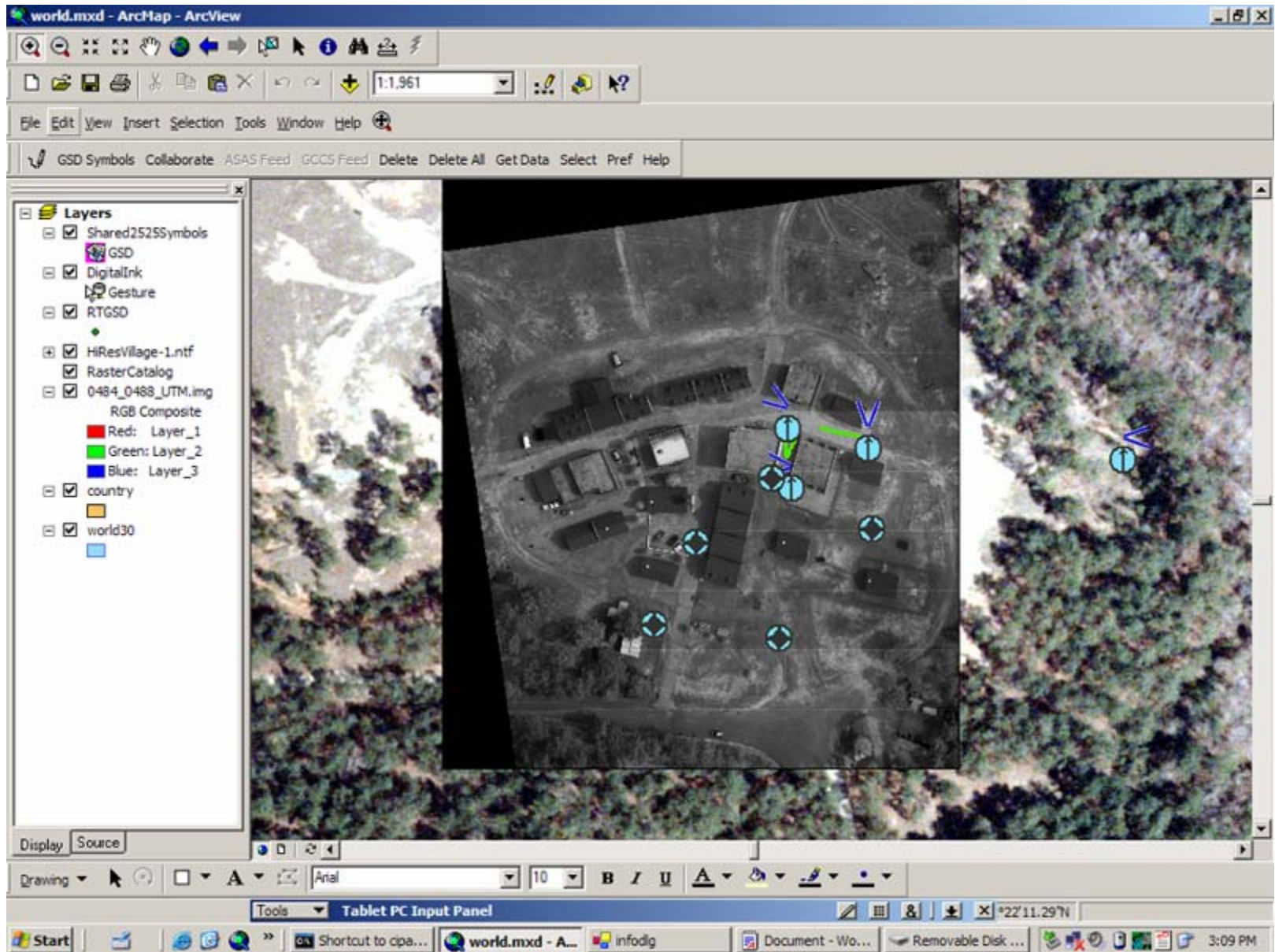


Convoy Tracking

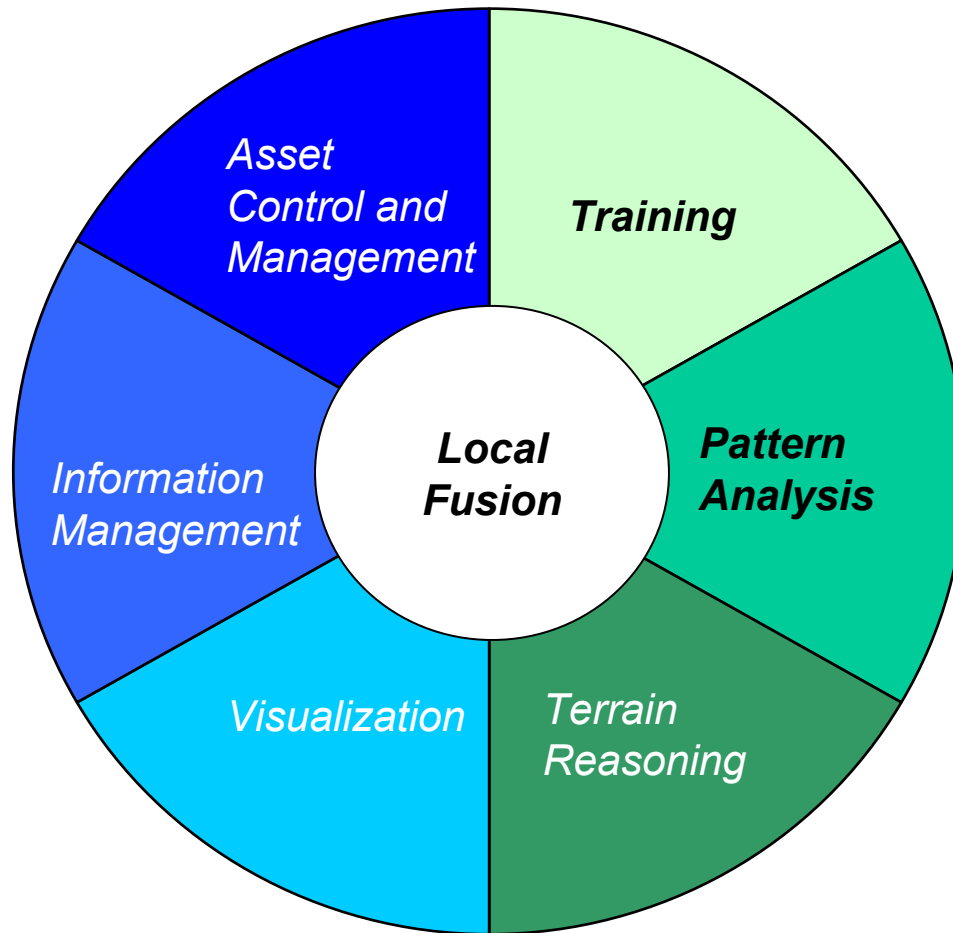
Warfighter View

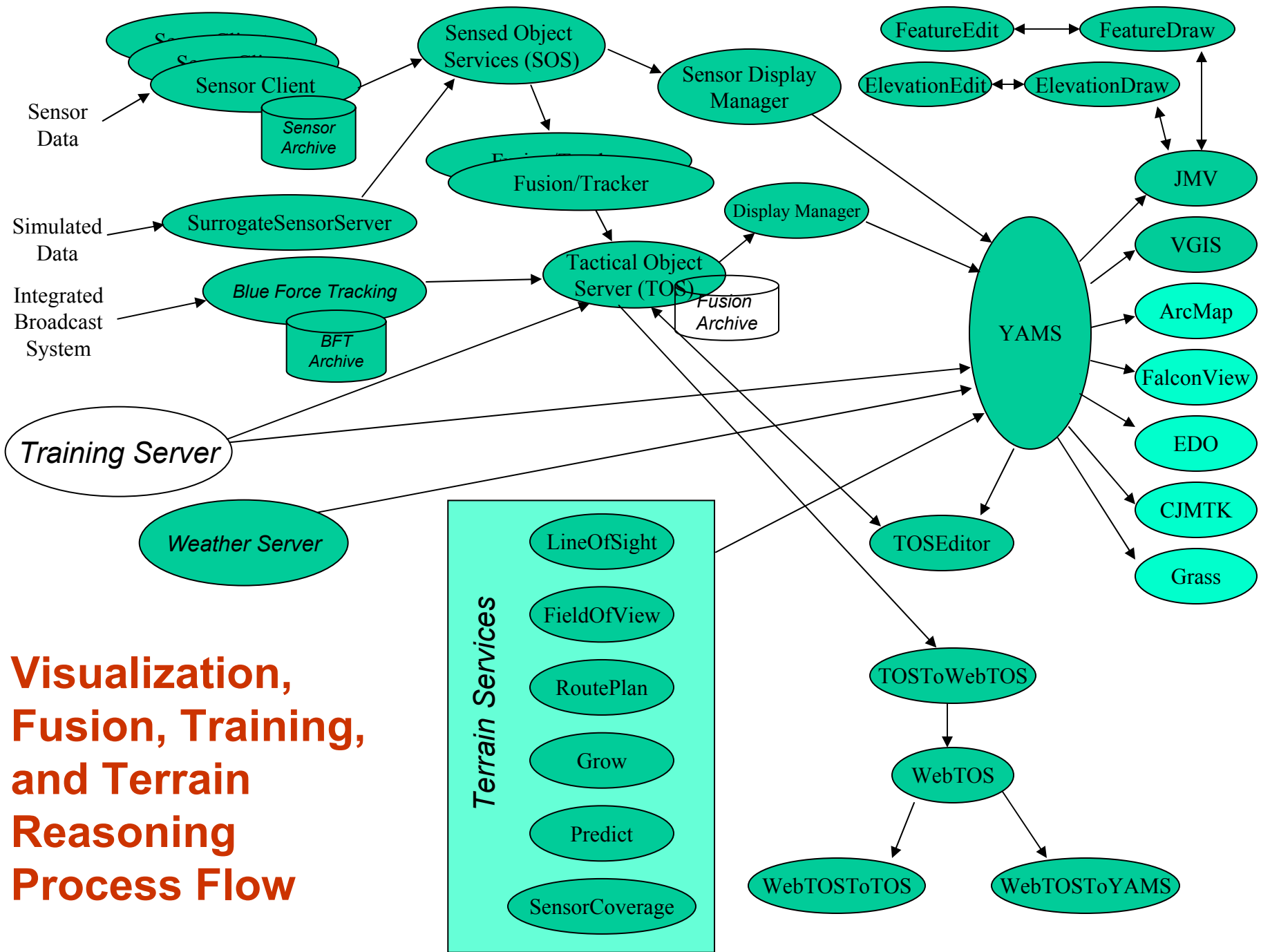


Warfighter View Local/Global Fusion



Extensions to Local Fusion





Fusion/Embedded Training Enables ...

- Platoon After Action Reviews
- Battalion Review of TTP's
- Blue and Red force Pattern Analysis
- Dismounted Infantry and Military Intelligence Cross Training
- Mission Rehearsals
- Military School Training Updates

Datamining/Pattern Recognition

- Playback with map context (window, forward and reverse)
- Temporal and spatial correlation with other events
 - COMINT
 - HUMINT
 - Enemy activity (disruptions in power, communications, internet)
 - Background activity (prayer, business, school, etc.)
 - Blue Force activity (checkpoints, patrols, convoys, etc.)
- Correlation with terrain features (lines of communications, masked areas, etc)
- Histogram time of event, distance to event, time between events