Army Intelligence Capability Gaps

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Operational Environment (2026-2035)

- Contested domains … from air/maritime deployment to cyber & space
- Enemy designed to keep the U.S. out … A2/AD
- No longer assume Air superiority
- Massed precision long-range fires, with area effects
- Increased lethality
- WMD proliferation
- Violent, brutal, ambiguous adversaries (Hybrid Threats)
- Sensor-rich
- Dense Urban areas and populations
- Intense information wars
- Less time to deploy and act (compressed decision cycles)
- Smaller more costly force structure

Army Intelligence Must…

- Leverage **MULTI-FUNCTIONAL, MULTI-INT and MULTI-MODAL** capabilities to enable ground force commanders to engage the enemy from a position of relative advantage, identify what the enemy values, and provide the situational understanding needed to deny the enemy what is valued.

- Maintain **ACCESS to the ENTERPRISE** with sufficient bandwidth to operate in a JIIM environment with reconfigurable platform architecture, and multi-level transport capability.

- Be **MOBILE** and move the team faster than the threat and match the mobility of the formation with high reliability and maintainability.

- Be **SURVIVABLE** with the same visual cues as the formation, with sufficient protection from the threat spectrum, and the ability to defeat SAF, IED, and rocket

- Be **EXPEDITIONARY** with the ability to deploy rapidly and operate in diverse environments and engage in a broad range of activities.

- Be **INTEROPERABLE** and partner with, use the capabilities of, and contribute to joint, interorganizational, or multinational efforts.

Dense Urban Terrain   Technological Advances   Multinational Operations   Extended LOCs   Tactically Mobile

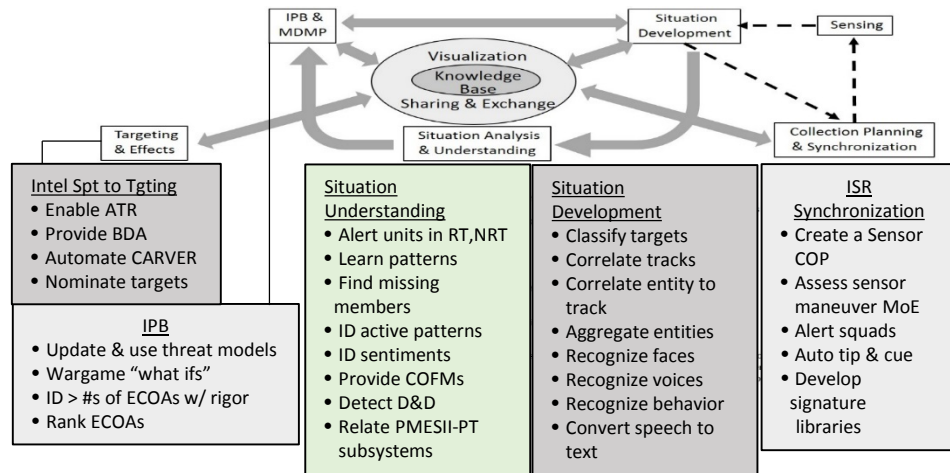Disrupt LOCs   Network Attack   Austere Locations   Total Army and Interorganizational Response

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Capability Gaps	Potential Solution Approaches
Training and information technologies that enable **Intelligence Support to Cyber Operations** in a fight versus a near-peer/peer in order to provide supported Commanders with cyberspace situational awareness.	• Artificial intelligence/Machine Learning • ID & track suspicious network behavior
Capability to **extend the Intelligence Enterprise to the tactical edge**, i.e. to maneuver squads through brigades, under disrupted, intermittent, limited (DIL) data transport conditions in order to satisfy PIR/IR, to protect the force, and to aid situational understanding.	• Real-time situational awareness • Robust and secure networks • Real-time threat alerts
Integrated Processing, Exploitation, Dissemination (PED) architecture (i.e., vertically and horizontally integrated) that uses common data links, networks, and interfaces to support time-sensitive decision-making and operations at tactical and operational levels.	• Processing at the sensor • Artificial intelligence/Machine Learning • Common computing environments • Echelon-specific applications
Capability to **share actionable intelligence with Joint, Intergovernmental, and Multi-national (JIM) partners** across security domains without compromising networks and sensitive sources and methods.	• Cross domain information exchange (CDIX) • Tailored threat alerts to coalition partners
Survivable, expeditionary terrestrial collection capabilities for multi-function teams to support expeditionary maneuver at requisite speeds, to maintain operational tempo, and in support of targeting.	• LPI/LPD receivers and sensors • Human-Machine Teaming • Plug n' play mission sensor packages

Broad Possibilities for Artificial Intelligence

Intel Spt to Tgting
- Enable ATR
- Provide BDA
- Automate CARVER
- Nominate targets

IPB
- Update & use threat models
- Wargame "what ifs"
- ID > #s of ECOAs w/ rigor
- Rank ECOAs

Situation Understanding
- Alert units in RT,NRT
- Learn patterns
- Find missing members
- ID active patterns
- ID sentiments
- Provide COFMs
- Detect D&D
- Relate PMESII-PT subsystems

Situation Development
- Classify targets
- Correlate tracks
- Correlate entity to track
- Aggregate entities
- Recognize faces
- Recognize voices
- Recognize behavior
- Convert speech to text

ISR Synchronization
- Create a Sensor COP
- Assess sensor maneuver MoE
- Alert squads
- Auto tip & cue
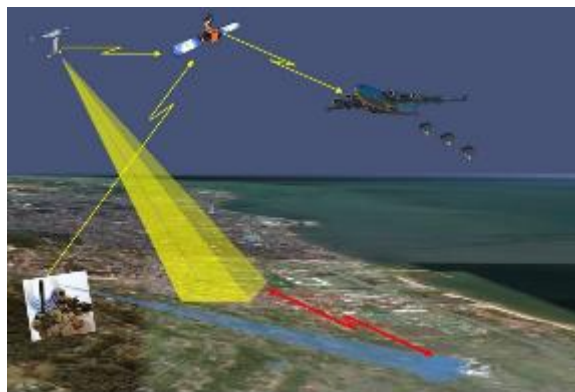- Develop signature libraries

Modeling, Simulation, and Visualization of the Threat

- Live, Virtual, Constructive Training
- Augmented Reality
- Agent-based Simulations
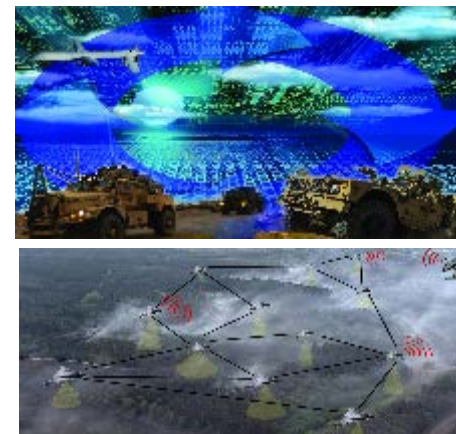- Game Theoretic M&S
- Rigorous tactical wargames

Real-Time Event Processing and Fusion

- Pre-process in RT at the sensor
- Reduce data size
- Enable automated PED / ATR
- Enable RT tracking of targets
- Immediately exploit & cross cue
- Support expeditionary forces
- Support Cross Domain Fires
- Support JCAM
- Enable Kill Webs (vice pt.-to-pt.)

Collection Modernization

- SIGINT/Cyber/EW Convergence
- Surveillance swarms
- Forensic speaker recognition
- Manpack systems for A2/AD

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