



SOF-Soar : Special Operations IFORs

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Special Operations Forces :

A completely different world

- Small teams (6-16) of highly trained soldiers
- Covert missions deep behind enemy lines
- In the field for up to a few weeks (“Snake eaters”)
- Vastly different scales (time, space)
- Emphasis on problem solving



SOFs : Services

- Each service has its own variety (with slight variations in tactics and deployment):
 - Army Special Forces
 - Army Rangers
 - Navy SEALs
 - Air Force Special Operations
 - Marine Expeditionary Unit



SOFs : 9 Core Missions

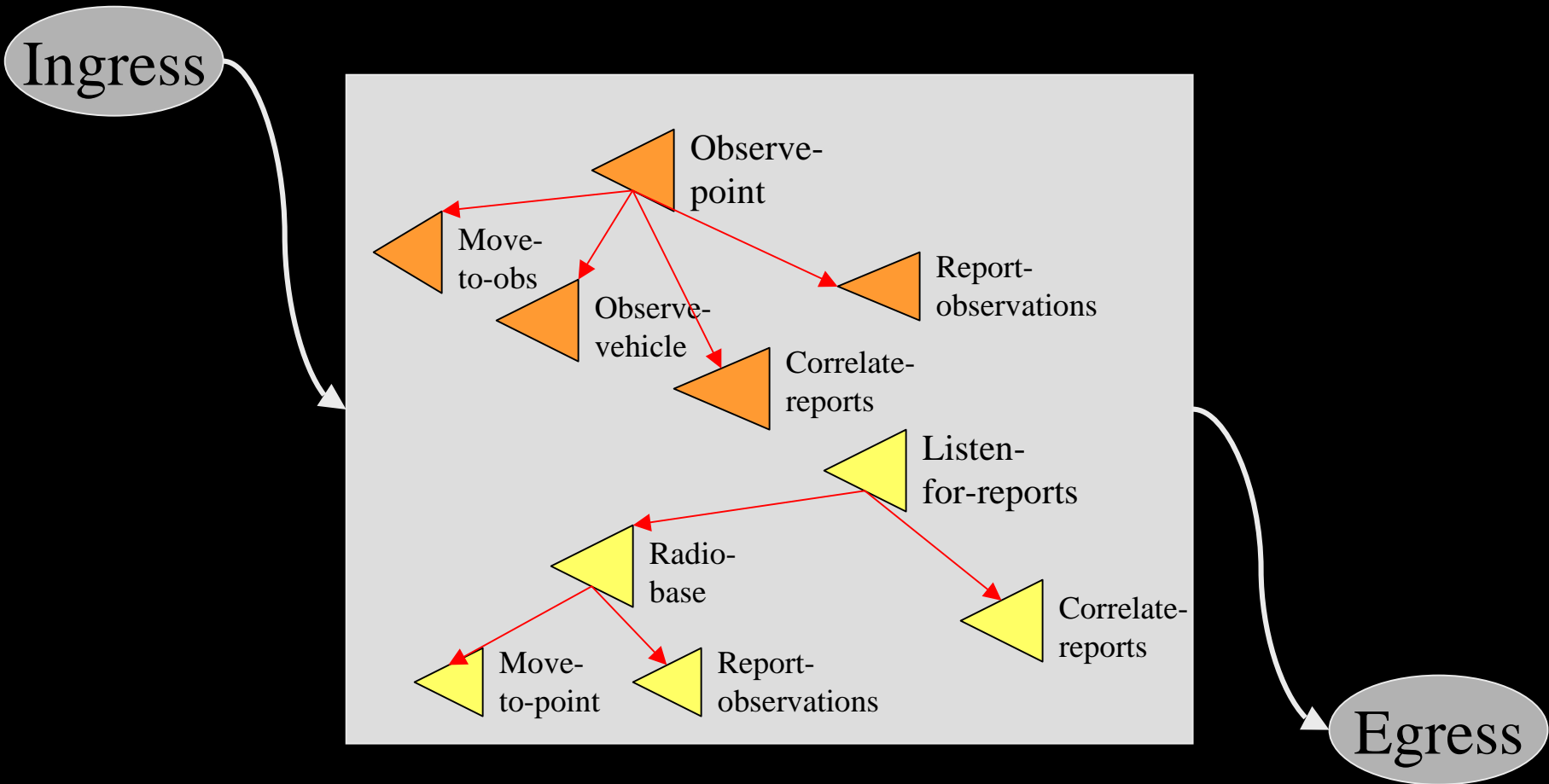
- Special Reconnaissance (SR) *
- Direct Action (DA) *
- Psychological Operations
- Civil Affairs
- Unconventional Warfare
- Combatting Terrorism
- Foreign Internal Defense
- Counterproliferation of WMD

SOFs : SR/DA

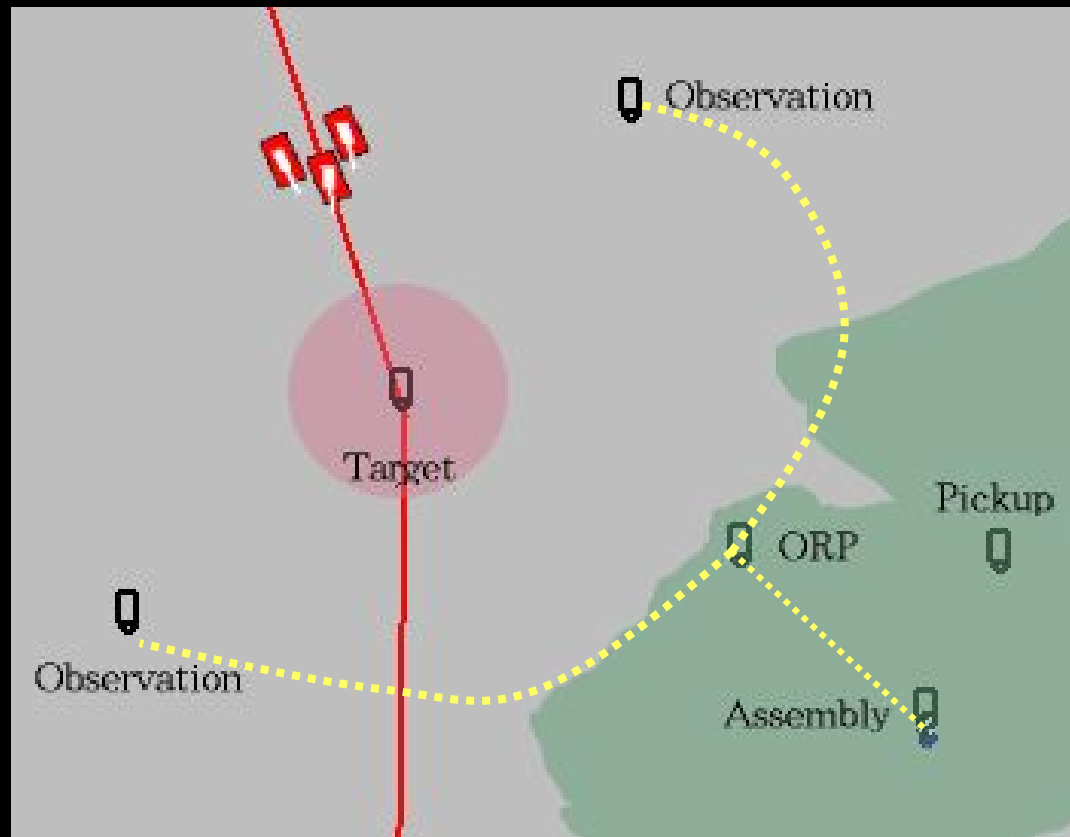


- Special Reconnaissance
 - Area or Point reconnoitering
 - Examples: specific troop movements, existence of WMD
- Direct Action
 - Quick strikes on specific targets to destroy, seize, or recover personnel or materiel
 - Examples: SCUD launch site demolition, Raid on small C2 compound

SOF-Soar : Long Range Recon Patrol



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SOF-Soar : Reconnaissance

SOF-Soar agents' observation criteria:

- Location to look for entities (point and radius)
- Entity type and subtype of vehicles (could be *any* for both)
- Size of the group (numeric for now)
- Direction the entities are heading
- Group force (friendly, enemy, neutral)

SOF-Soar : Communication (1)

- SALUTE reports
 - **S** - size of group or event
 - **A** - activity of the group
 - **L** - location of the group
 - **U** - unit markings
 - **T** - time of sighting
 - **E** - equipment

SOF-Soar : Communication (2)

Example:

“At 1304 observed 3 t-72s tank moving at 56 degrees 34 minutes 34 seconds by 64 degrees 43 minutes 22 seconds heading 174 at 24 miles per hour with red markings and unknown equipment”

SOF-Soar : Tools

- SOFEE -- Java-based exercise specification tool
- Comm Panel -- commands from operator to agent
- Radio Log -- logs communication traffic
- (Situational Awareness Panel) -- visualize agent's decisions and situational knowledge

SOF-Soar : Interesting Issues

- Team Behavior
- Situational Awareness
- Fatigue in JSAF's DI models
- Terrain is much more important
- Problem Solving and Planning (more similar to RWA-Soar than TAS)

SOF-Soar : Progress

- Initial funding for proof of concept
- I/ITSEC demo won us some attention from important people (SOCOM)
 - resulted in a productive KA visit to SOCOM
- SOF-Soar to be used in J9's UV01 exercise
- Currently working to expand mission types and realism based on KA

SOF-Soar : Hazards

- JSAF users not sure how to use SOFs in large exercises (so far just as “English-speaking ground sensors”)
- JSAF doesn’t currently have high fidelity models of Dismounted Infantry
- Competition with other simulators
 - e.g., JCATS has stochastic models of SOFs for wargaming and analysis