

Introduction to Reconnaissance and Surveillance





Terminal Learning Objective



Action: Acquire and apply a basic understanding and knowledge of Reconnaissance and Surveillance Operations.

Condition: As part of a Reconnaissance force conducting Reconnaissance and Surveillance operations, given a classroom period of instruction and note taking material.

Standard: Students observe, collect and report during all Reconnaissance and Surveillance operations to successfully execute missions in the FTX and during combat operations.



Administrative Notes



Safety Requirements: In case of fire.

Risk Assessment: Low.

Environmental Considerations: If you brought it in take it with you.

Evaluation: During your STX and FTX you will be required to conduct Reconnaissance and Surveillance. Your understanding of the methods for conducting Reconnaissance & Surveillance may determine if your graded patrol is a GO, or a NO GO.



References



- ADRP 2-0 Intelligence
- FM 3-98 Reconnaissance and Security Operations
- FM 3-20.96 Reconnaissance and Cavalry Squadron
- ATTP 3-20.97 Dismounted Reconnaissance Troop
- ATP 3-20.98 Reconnaissance Platoon
- ATP 3-21.8 Infantry Platoon and Squad
- FM 3-55 Information Collection
- FM 3-55.93 Long Range Surveillance Unit Operations
- ATTP 3-18.04 Special Forces Special Reconnaissance Tactics, Techniques, and Procedures
- ADRP 3-90 Offense and Defense



Agenda



- Definitions: Reconnaissance vs. Surveillance
- Fundamentals of Reconnaissance
- Forms of Reconnaissance, Reconnaissance Methods, Commander's Reconnaissance Guidance, and Reconnaissance Management Methods.
- Identify the Types and Characteristics of Surveillance.
- Organization, METL, Advantages/Disadvantages of a Reconnaissance Team



Enabling Learning Objective A



Action: Identify the Purpose of Reconnaissance & Surveillance Operations.

Condition: Given a classroom period of instruction, note taking materials and a FTX.

Standard: Students identify types and elements of Reconnaissance Operations to successfully execute and lead them in the FTX and during combat operations.



Reconnaissance



Reconnaissance is a mission undertaken to **obtain**, by visual observation or other detection methods, **information** about the activities and resources of an enemy or potential enemy or to secure data concerning the meteorological, hydrographical, or geographical characteristics and the indigenous population of a particular area

(JP 2-0).



Surveillance



Surveillance is the systematic observation of aerospace, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means (JP 3-0).



Surveillance vs Reconnaissance

RECONNAISSANCE

Active
Short duration
Many TTPs

Collecting
Reporting

SURVEILLANCE

Passive
Continuous
Systematic



Surveillance vs Reconnaissance

Stealth within R & S

- Stealth during reconnaissance patrols is key to achieving surprise for a decisive operation.
- In the urban environment, commanders usually don't have the option for standoff distance.
- *Stealth*, in this instance is replaced by Soldier awareness and observation of his surroundings while on patrol or mission.



Surveillance vs Reconnaissance



Observation and Reporting

- ***The commonality of surveillance and reconnaissance***
- Fact vs. Assumption
- Based on the **PIR / Indicator** from the commander
- Soldiers who understand how to optimize the collection and reporting of information facilitate proper production of intelligence
- Training instills all Soldiers with the mindset that every Soldier is a sensor on every mission



Purpose of Reconnaissance and Surveillance



- Units performing reconnaissance, security, and surveillance missions are organized, trained, and equipped to provide the critical and timely information needed by the commander and his staff in order to develop intelligence.



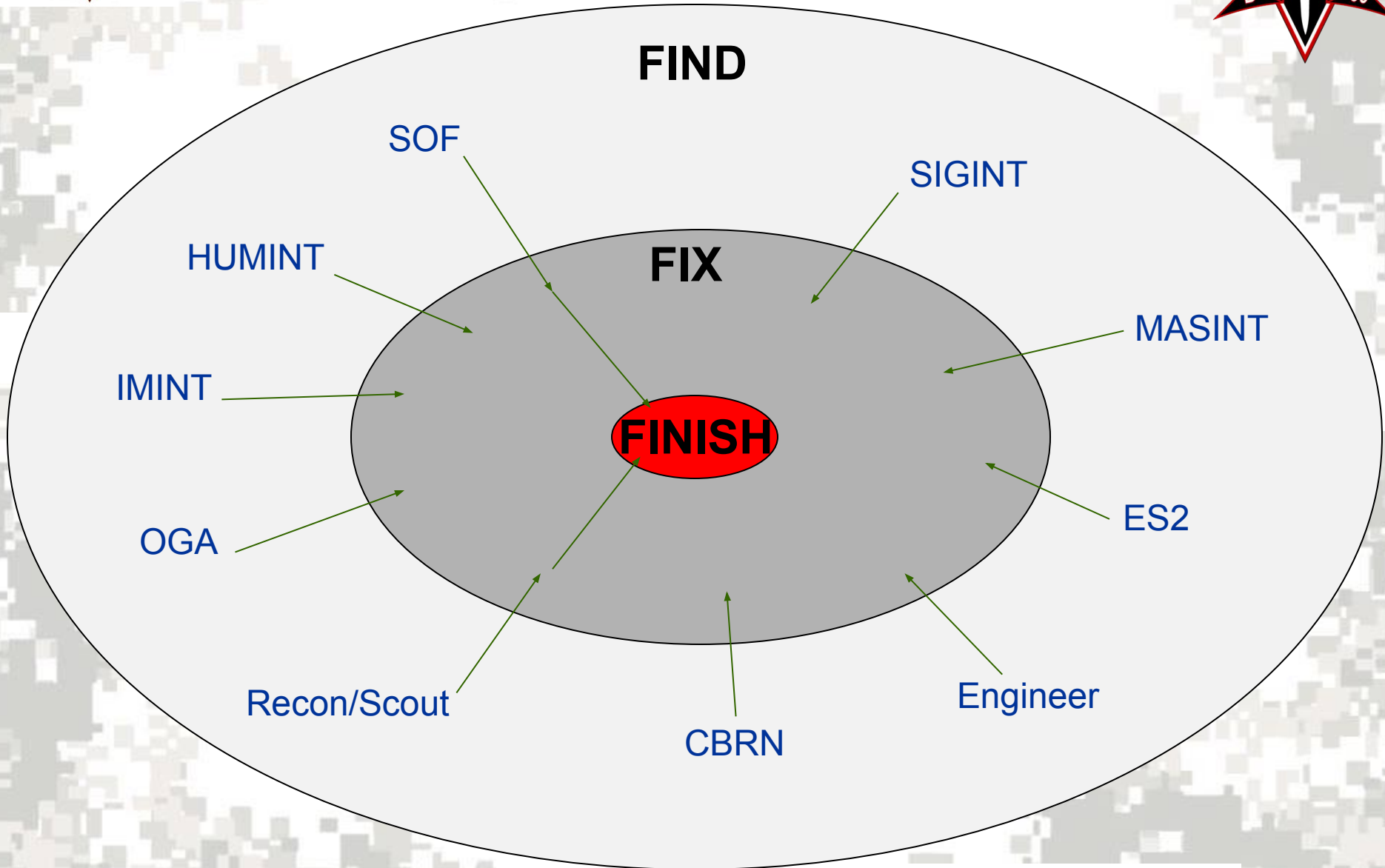
Information Quality Criteria

- **Accuracy**
Detailed descriptions of what you actually see
- **Timeliness**
Latest Time Information is of Value (LTIOV)
- **Usability**
How does this help higher? Does it answer PIR / Indicator?
- **Completeness**
What am I missing that would help someone not looking at this have a better understanding?
- **Precision**
What percentage, or how much of my report is relevant to the commander?
- **Reliability**
Is the information I am reporting producing consistent, useful results and meeting the commander's intent?

These criteria help to feed Actionable Intelligence: Information that answers operational requirements to a sufficient degree and with sufficient reliability to support the commander's decision



F3EA Targeting Process





Urban R&S

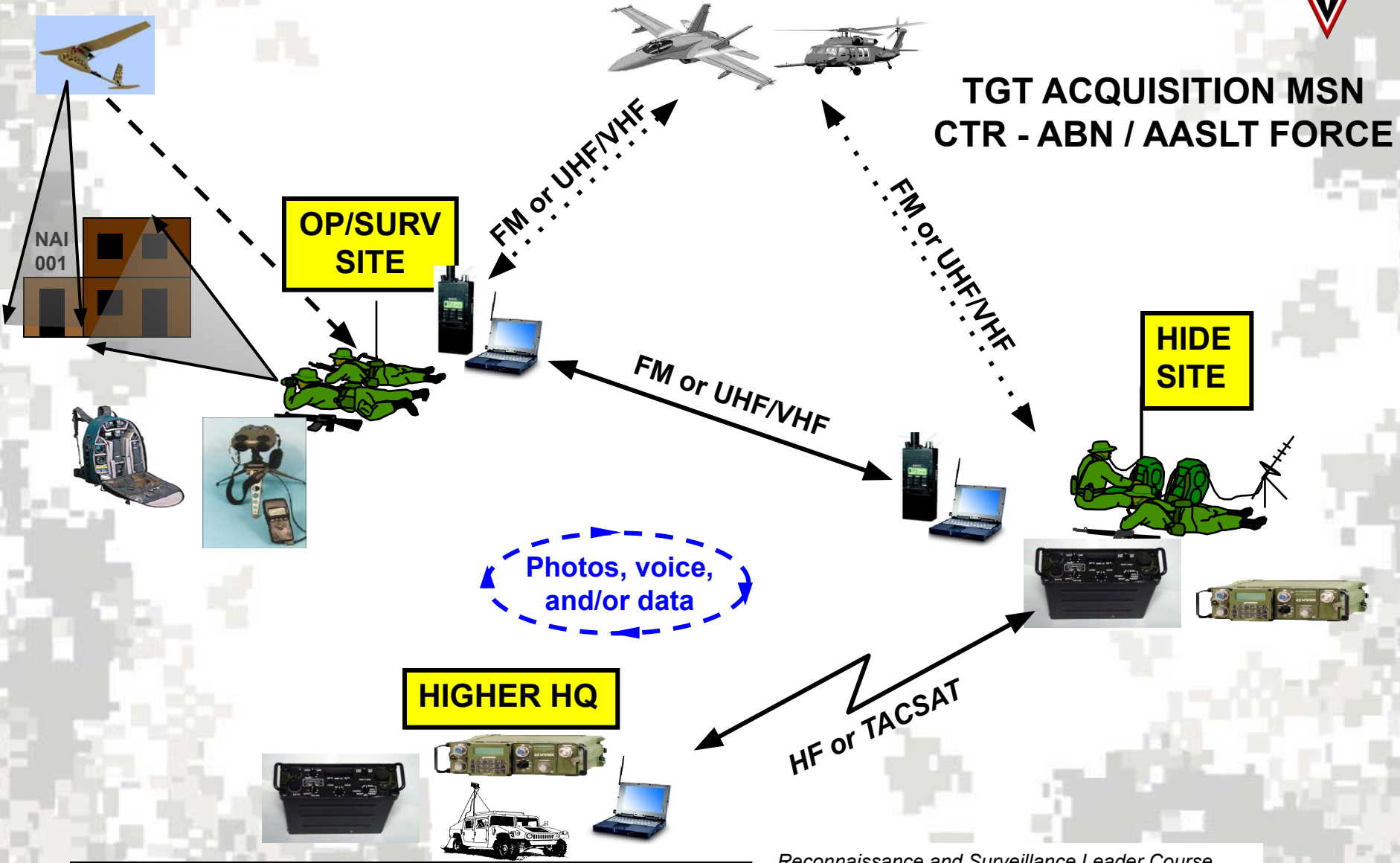


- Principles of patrolling apply to every situation
- Urban most dangerous
- Purpose is to determine vulnerabilities
- Surveillance
 - quantifies targets
 - notes possible weaknesses
 - identifies potential attack methods.
- When targeting personnel
 - patterns of behavior
 - transportation method
 - route taken
 - Types of security
- When targeting fixed targets
 - Physical security rotations and disposition
 - Entry points etc...

This information will then be used to select the best time and location for the attack, the type of attack and the resources needed to execute it.



EXECUTION





Enabling Learning Objective B



Action: Identify the Fundamentals of Reconnaissance

Condition: Given a classroom period of instruction, note taking materials and a FTX.

Standard: Students identify types and elements of Reconnaissance Operations to successfully execute and lead them in the FTX and during combat operations.



Fundamentals of Reconnaissance



- Ensure continuous reconnaissance.
- Do not keep reconnaissance assets in reserve.
- Orient on the reconnaissance objective.
- Report all information rapidly and accurately.
- Retain freedom of maneuver.
- Gain and maintain threat contact.
- Develop the situation rapidly.



Ensure Continuous Reconnaissance



- R & S units are integral to the ISR effort, however, they are limited in their ability to conduct and sustain continuous reconnaissance.
- The Commander conducts reconnaissance before, during, and after all operations.
 - Before: The focus is on filling information gaps about the enemy, civilian considerations, and the terrain.
 - During: The focus is providing the commander with updated information that verifies the enemy's composition, dispositions, and intentions as the battle progresses, allowing commanders to verify which COA the enemy adopts and to determine if the plan is still valid based on actual events in the AO.
 - After: The focus is maintaining contact with the enemy forces to determine their next move. It also focuses on collecting information necessary for planning subsequent operations.



Do Not Keep Reconnaissance Assets in Reserve



- Reconnaissance assets, like artillery assets, are never kept in reserve.
- When committed, reconnaissance assets use all of their resources to accomplish the mission. *Does this mean all assets are committed at all times?*
- Capabilities and mission variables will determine what assets are used to achieve maximum coverage need to answer CCIRs.
- The ability to sustain and rest assets is critical; does not mean assets are being held in reserve.



Sample Information Collection Sync Matrix



DTG	LOCAL	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
Enemy		IED OPS ALONG MAIN SUPPLY ROUTES										ATTACK LOCAL SECURITY/CIVIL/POLITICAL/INFRASTRUCTURE										IED OPS				
Friendly		ROUTE CLEARANCE/COUNTER-IED/TARGETING										LOCAL SECURITY AND NATION BUILDING OPERATIONS										CIED OPS				
Focus		PRIORITY OF SUPPORT; CIED/PROTECTION OF THE FORCE/INDICATIONS AND WARNING/TARGET DEVELOPMENT																								
52 ID	E-8 JSTARS	MTI ON BORDERS & IED HOTSPOTS NAIs 3106, 3107, 3108, 3109, 3110, 3111, 3113, 3117, 3122																								
	MQ-1 PREDATOR	ISO OF JTF REQUIREMENTS; ON CALL FOR 52 ID AD HOC REQUESTS																								
	EC-130 COMPASS CALL																ISO OF JTF REQUIREMENTS; ON CALL FOR 52D ID AD HOC REQUESTS									
	MQ-5B HUNTER											ISO 52 ID REQUIREMENT, ON CALL FOR 3/52 AD HOC REQUESTS														
	EA-6B PROWLER											ISO THEATER REQUIREMENTS; ON CALL FOR 52 ID AD HOC										ISO JTF REQUIREMENTS; ON CALL FOR 52 ID AD HOC				
3 BCT/ 52 ID (3/52)	PROPHET HCT 10	24-HOUR GROUND-BASED SIGINT																								
	EOD TM 1	ISO CIED OPERATIONS																				ISO CIED OPS				
	EOD TM 2	ISO CIED OPERATIONS																				ISO CIED OPS				
	WIT 1																									
	CA TM	COORDINATE & ASSIST LOCAL GOVERNMENT TO INCREASE CIVIL CAPACITY, RESTORE ESSENTIAL SERVICES & SUSTAIN ECONOMIC DEVELOPMENT																								
	RQ-7B SHADOW A Co											ISO 3/52 BCT REQUESTS					ISO 3/52 BCT REQUESTS					ISO 3/52 BCT REQUESTS				
	B Co	STABILITY TASKS IN VICINITY OF NAHIAT AL-BAB, AL-SHARQ (NAIs 3113, 3117)															STABILITY TASKS IN VICINITY OF MEZRAA, MAZIK, AHMAR (NAIs 3110, 3121, 3124)									
	RECON	RECON OF IED HOTSPOTS ON ASR LONG ISLAND (NAIs 3110, 3111)																								
4-77 CAB	ENGINEER	MSR/ASR ROUTE CLEARANCE (NAIs 3110, 3111)																				ROUTE CLEARANCE				
	HCT40 (DS)											HUMINT COLLECTION OPS IN EASTERN & SOUTHERN GHAZI PROVINCE														
	EOD	ON CALL IED/UXO RENDER-SAFE AND DISPOSAL OF IED & UXO																								
	CA TM	COORDINATE & ASSIST LOCAL GOVERNMENT TO INCREASE CIVIL CAPACITY, RESTORE ESSENTIAL SERVICES & SUSTAIN ECONOMIC DEVELOPMENT																								
2-30 CAB	Q-48 RADAR A CO	TARGET ACQUISITION OF THREAT INDIRECT FIRE WITHIN 4-77 CAB AREA OF OPERATIONS																								
	B CO											STABILITY TASKS IN VICINITY OF MEDINA-JABAL (NAIs 3102, 3108)														
	RECON	RECON OF IED HOTSPOTS ON ASR IA DRANG (NAI 3108)																								
DTG	LOCAL	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	



Orient on the Reconnaissance Objective



- The reconnaissance units scheme of maneuver is focused on an objective or set of objectives **despite** contact. The objective may be a terrain feature, a specific area, an enemy formation, or other type of threat force. It is critical that the reconnaissance units leadership completely understand the mission focus before they begin the planning process. **WHY?**
- *Reconnaissance objective* is a terrain feature, geographic area, enemy force, adversary, or other mission or operational variable, such as civil considerations, about which the commander wants additional information. (ADRP 3-90).

Reconnaissance Objective = most critical piece of information to the commander and is often a more refined reconnaissance focus.



Report all Information Rapidly and Accurately



- Reconnaissance assets acquire and report accurate and timely information on the enemy, civil considerations, and the terrain where operations occur.
- Information loses value over time. Reconnaissance units must report all information exactly as they see it and as fast as possible. *What about information you don't see?*



Retain Freedom of Maneuver



- Reconnaissance assets must maintain battlefield mobility to accomplish missions. *What happens if they are decisively engaged? What is decisive engagement?*
- What helps reconnaissance assets to retain freedom of maneuver?
 - Initiative
 - Knowledge of both the terrain and the enemy (IPB)
 - Detailed analysis and planning
 - Battle drills
 - Employment of indirect fires



Gain and Maintain Enemy Contact



- Once a unit conducting reconnaissance gains contact with the enemy, it maintains that contact unless the commander directs otherwise. *Does this mean you cannot break contact? Which form of contact?*
- Contact will be maintained using ALL AVAILABLE RESOURCES. Methods to do so may range from surveillance to close combat. *What is the most preferred and sufficient method?*
- **SURVEILLANCE COMBINED WITH STEALTH**



Develop the Situation Rapidly



- Reconnaissance assets must quickly determine the threat it faces when encountering an enemy force or obstacle.
 - Enemy force: composition, dispositions, activities, and movements and assess the implications of that information
 - Obstacle: type and extent and if it is covered by fire.

In most cases the unit developing the situation uses actions on contact.



Enabling Learning Objective C



Action: Describe the forms of Reconnaissance, Reconnaissance Methods, Commander's Reconnaissance Guidance, and Reconnaissance Management Methods.

Condition: Given a classroom period of instruction, note taking materials and a FTX.

Standard: Students successfully execute and lead their peers using necessary reconnaissance and surveillance patrols in the FTX and during combat operations.



Forms of Reconnaissance



- Route reconnaissance
- Zone reconnaissance
- Area reconnaissance
- Reconnaissance in force
- Special reconnaissance



Route Reconnaissance



- Route reconnaissance focuses along a line of communications such as a road, railway, or cross country mobility corridor.
 - **It provides:** information on route conditions such as obstacles and bridge classifications and enemy and civilian activity along the route.
 - **It includes:** the route and terrain along the route where the enemy could influence the friendly force's movement.



Zone Reconnaissance

- Zone reconnaissance involves a directed effort to obtain detailed information on the following in a zone defined by boundaries:
 - all routes
 - obstacles
 - terrain
 - enemy forces
 - civil considerations
- May include several route or area reconnaissance missions assigned to subordinate units.



Area Reconnaissance

- Area reconnaissance focuses on obtaining detailed information about the enemy activity, terrain, or civil considerations in a prescribed area.
- May include a town, a neighborhood, a ridgeline, woods, an airhead, or any other feature critical to operations.
- The area may consist of a single point (such as a bridge or an installation).

Units can conduct an Area Reconnaissance with several NAs within the specified boundaries



Reconnaissance in Force

- A reconnaissance in force is an aggressive reconnaissance conducted as an offensive operation with clearly stated reconnaissance objectives.
 - A deliberate combat operation that discovers or tests the enemy's strength, dispositions, or reactions.

Does a Scout Squad or Team have the capability to conduct a Reconnaissance in Force?



Special Reconnaissance



- *Special reconnaissance* includes reconnaissance and surveillance actions conducted as a special operation in hostile, denied, or politically sensitive environments to collect or verify information of strategic or operational significance, employing military capabilities not normally found in conventional forces (JP 3-05).
- Special reconnaissance activities include:
 - Environmental reconnaissance.
 - Armed reconnaissance.
 - Target and threat assessment.
 - Post strike reconnaissance.



Reconnaissance Methods

- Mounted
- Dismounted
- Aerial
- Reconnaissance by Fire

FM 3-98



Commander's Reconnaissance Guidance



- Commanders must provide specific guidance to the reconnaissance force; focus, tempo, engagement/disengagement criteria, and displacement criteria.
- Is an extension of the Commander's intent and is designed to focus the reconnaissance Commander's efforts in relation to higher's mission.



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Reconnaissance Focus



- Reconnaissance focus helps to concentrate and prioritize the efforts of Reconnaissance assets during the information collection fight.
 - Threat
 - Infrastructure
 - Terrain/Weather
 - Society

The Commander may identify the reconnaissance objective through refinement or elaboration of the focus.



Reconnaissance Push vs. Reconnaissance Pull



- Reconnaissance Pull
 - Used when the enemy situation is not well known and or the situation is rapidly changing.
 - ISR assets are used to confirm or deny initial PIR before the decision on a COA or maneuver option; “pulling” the commander into the development of a course of action.
 - Requires an integrated reconnaissance plan that is executed prior to the Commander making a COA decision.
- * A reconnaissance pull is often executed immediately following the higher command WARNORD#2 (Mission Analysis complete).



Reconnaissance Push vs. Reconnaissance Pull (cont'd)



- Reconnaissance Push
 - Used once the Commander is committed to a COA or maneuver option.
 - Commander “pushes” his R&S assets forward, as necessary, to gain greater visibility on specific NAIs to confirm or deny the assumptions on which his COA is based
 - Information gained during the “push” is used to finalize higher’s plan.
- * A reconnaissance push is often executed immediately following the higher command WARNORD#3 (COA Approved).

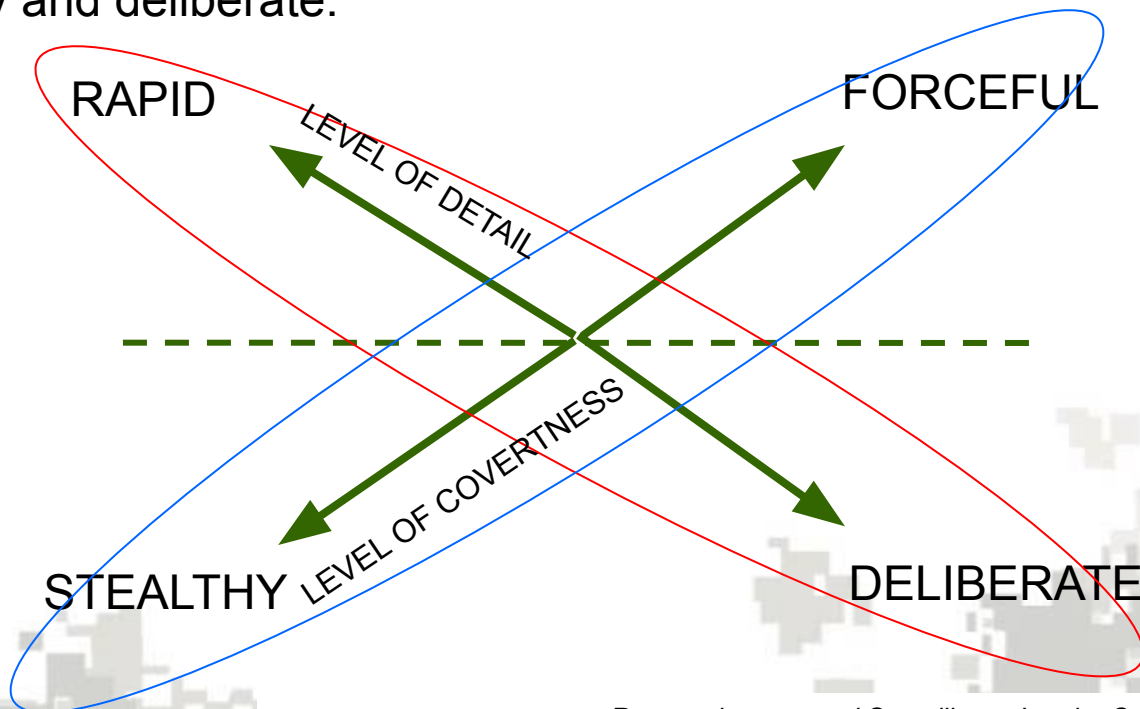


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Reconnaissance Tempo



- In reconnaissance, tempo defines the level of covertness (signature) and level of detail that the higher commander requires.
- Reconnaissance tempo is *rapid* or *deliberate* and *forceful* or *stealthy*.
- The four possible tempos are:
 - Forceful and Rapid; Forceful and Deliberate; Stealthy and Rapid; Stealthy and deliberate.





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Engagement/Disengagement Criteria



- Establish minimum thresholds for engagement (lethal and nonlethal).
- The criteria clearly specify which targets the reconnaissance element is authorized to engage, and which the reconnaissance element will hand off to other units or assets.
- Disengagement criteria establishes a maximum size element that units performing reconnaissance missions can engage up to. Doing so greatly *reduces decisive engagement* and enables elements to retain freedom of maneuver.



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Displacement Criteria



- Defines triggers for planned withdrawal, passage of lines, or reconnaissance handover between units.
- Conditions are either event, time, or threat driven:
 - Event driven: PIR met
 - Time driven: LTIOV (Latest Time Information is of Value) met
 - Threat: Observation Posts (OPs) compromised
- In other words displacement criteria is when conditions are set for a “change of mission”



Reconnaissance Management



- *Cueing* is the integration of one or more types of reconnaissance or surveillance systems to provide information that directs follow-on collecting of more detailed information by another system. (*Limited assets, large area*)
- *Mixing* is using two or more different assets to collect against the same intelligence requirement. (*Increases probability of collection, and more complete information*)
- *Redundancy* is using two or more like assets to collect against the same intelligence requirement. (*Improves chances required information will be collected*)



Enabling Learning Objective D



Action: Identify the Types and Characteristics of Surveillance.

Condition: Given a classroom period of instruction, note taking materials and a FTX.

Standard: Students identify types and elements of Reconnaissance Operations to successfully execute and lead them in the FTX and during combat operations.



Types of Surveillance



- Zone
 - Area
 - Point
 - Network
- **Note:** *Forms of reconnaissance, as opposed to types of surveillance, are associated with maneuver units and missions.*



Surveillance Characteristics



- Maintains continuous observations of all assigned NAIs and TAIs.
- Provides early warning.
- Detects, tracks, and assesses key targets.
- Provides mixed, redundant, and overlapping coverage.



Enabling Learning Objective E



Action: Describe the Organization, METL, and the Advantages/Disadvantages of a Deep Dismounted Reconnaissance Team

Condition: Given a classroom period of instruction, note taking materials and a FTX.

Standard: Students identify all types and elements of Reconnaissance Operations to successfully execute and lead them in the FTX and during combat operations.



RSLC Teams



- While in RSLC, you will act as a member of a Deep Reconnaissance team. Although the content of RSLC is not specific to any Reconnaissance unit, the composition and missions of a “Deep Reconnaissance team” lends itself to our course set up and FTX grading.
- In order properly operate within your team throughout the course and pass the graded FTX, it is imperative to know the duty positions and responsibilities of RSLC specific teams.



Reconnaissance Team Composition



Team Leader (TL)

Assistant Team Leader (ATL)

Radio Telephone Operator (RTO)

Senior Scout Observer (SSO)

Scout Observer (SO)

Assistant Radio Telephone Operator (ARTO)



Reconnaissance Team Composition



- Mission Command – TL & RTO
- Surveillance – ATL & SSO
- Security – ARTO & SO

**Team break down and assigned duties are the Team Leaders responsibility*



Reconnaissance Team Composition



Team Leader

- TL is typically an E-6 or an experienced E-5.
- Should be a Recon SME
- TL is overall in charge of the mission.
- TL will typically stay in Hide site to supervise report and coordinate multiple surveillance sites when used.
- The patrol log is an overall synopsis of everything the patrol accomplished or ran into during the mission.

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Reconnaissance Team Composition



Assistant Team Leader

- ATL is second in chain of command.
- Typically an E-5 or experienced E-4.
- Overall in charge of security and light discipline of the patrol.
- Acts in much the same way as a platoon sergeant acts in a line platoon.
- ATL will manage the surveillance site.
- The surveillance log is a detailed description of all actions that took place on the NAI during surveillance.



Reconnaissance Team Composition



Radio Telephone Operator

- RTO is third in Chain of command.
- RTO is typically an E-4 or below. Although some units have E-5 RTO's.
- Responsible for all aspects of HF communication and reporting within the Hide Site.
- The Commo log is a detailed description of all reports the team sent and also contains commo settings and antenna data.



Reconnaissance Team Composition



Senior Scout Observer

- SSO is typically an E-5 or below.
- First in the order of movement.
- In charge of planning routes during planning.
- May operate his own surveillance site when there are multiple surveillance sites.

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Reconnaissance Team Composition



Assistant Radio Telephone Operator

- ARTO assists the RTO with the conduct of HF Communications.
- ARTO is typically E-4 or below.
- ARTO assists in security in the Hide Site.



Reconnaissance Team Composition



Scout Observer

- SO is typically E-4 or Below.
- SO assists in Observing and Recording in the Surveillance Site.
- Larger teams may have SO's in the Hide site or secondary Surveillance Sites as well.
- Assists in emplacing Claymores and enforcing security.



Typical Reconnaissance Team METL



- Conduct Intelligence, Surveillance, Reconnaissance Operations
- Report
- Target Acquisition & Combat Assessment (Battle Damage Assessment)
- Target Interdiction
- Insertion/Extraction (SL, MFF, Airmobile, SPIES, FRIES, Vehicle, Amphibious, and Foot)
- Mission Command of the Reconnaissance Unit



Reconnaissance Team Advantages



- Provide persistent surveillance on targets that can be covered only intermittently by most other systems (human sensor).
- Teams avoid contact with enemy forces and local population.
- Teams depend on expert knowledge of communications equipment, enemy TTPs, product development.
- Team members depend on the use of stealth, cover, concealment, and their dismounted patrolling skills to remain undetected.
- Collect and transmit near-real-time digital imagery.
- Operate in inclement weather and over difficult terrain in a variety of environments (woodland, urban).



Reconnaissance Team Advantages



- Use special equipment.
- Demonstrate the “art of camouflage.”
- Flexible infiltration methods, such as: stay behind, over land, airborne.
- Exfiltrate over land, water, air, conduct link up with partisan, non-partisan
- Conduct dismounted operations for up to 7 days with little or no external direction and support.
- Conduct extended duration operations with additional support.
- Conduct air to ground integration.
- Conduct multiple reconnaissance and surveillance missions (CTR, area, zone, route reconnaissance, sub-surface surveillance site, urban surveillance site).



Reconnaissance Team Disadvantages



- Team firepower limited to small arms and claymores.
- Limited organic mobility assets.
- Team equipment and supplies include only what the team can man-pack or cache dismounted.



Questions?