



## CTC Notes

### National Training Center (NTC)

#### Force-on-Force Convoy STX Lane

By Captain Christopher Kuhn

During a recent rotation at NTC, the Sidewinder team organized and conducted several situational training exercise (STX) lanes. One of those included a convoy lane that trained units on the dangers currently encountered on a daily basis by convoys deployed for Operations Enduring Freedom and Iraqi Freedom. These notes address the setup of the lane so that units can train this critical task at home station.

#### Plan the Training

The first step is planning the training and allocating a suitable training area to conduct the training. The convoy route should be long enough to allow each event on the lane to occur independently of each other, as well as allow for retraining on certain events. The lane is designed for a company-sized element and consists of a unit receiving a fragmentary order (FRAGO) to conduct a mounted tactical road march along a specified route. The convoy commander will conduct troop-leading procedures (TLP), issue a movement order, and command and control the convoy along the designated route. The convoy will encounter various contacts along the route, to include a civil disturbance, a rocket-propelled grenade (RPG) attack, an improvised explosive device (IED), and a near ambush. For the STX lane, the Opposing Force (OPFOR) and observer-controllers (OCs) must be identified. The following resources are required:

- OPFOR truck: 1
- Simulated RPGs: 2
- Civilian vehicles: 3
- Injured civilian on the battlefield (COB) moulage kits: 3
- Simulated man (SimMan): 1
- IED (inert): 1
- Daisy-chained IED: 1
- COBs (wedding party): 14
- Paramilitary (RPG ambush): 3
- Explosive ordnance disposal (EOD) personnel: 2
- Detainee (anti-U.S.) COBs: 3
- Suspect (possibly anti-U.S.) COBs: 3

- Paramilitary snipers: 2
- OCs: 4
- Route: Approximately 30 kilometers

#### Train and Certify Leaders

The training objectives for the lane for the OCs, OPFOR, and unit leaders should be to—

- Prepare for combat.
- Conduct a tactical road march.
- React to a civil disturbance.
- React to actions on contact.
- Treat and evacuate casualties.
- Call for medical evacuation.
- Perform recovery operations.
- Conduct consolidation and reorganization.

#### Recon the Site

The OCs and OPFOR should conduct a joint reconnaissance of the route to determine the locations of the events, rehearsal areas, and after-action review (AAR) location.

#### Issue the Plan

The unit should receive the FRAGO at least one day before the scheduled lane execution. This will allow the convoy commander and the unit to conduct their TLP, precombat checks (PCCs), precombat inspections (PCIs), and rehearsals.

#### Rehearse the Lane

It is important for the OCs and OPFOR to conduct a rehearsal of the execution of the lane. Each event on the route should be rehearsed, to include movement to the training area, emplacement of OPFOR forces and IEDs, contact with the training unit, and criteria for disengagement. Unit rehearsals could focus on reactions to contact, casualty evacuation (CASEVAC), and movement techniques.

#### Execute the Lane

The lane begins when the convoy commander receives the FRAGO. The unit then begins TLP, rehearsals, and production of its movement order. The unit will have a set start point time, which allows the lane officer in charge (OIC) to ensure that the lane events are set up and ready for execution as the unit moves along the route. The figure on page 35 shows an example of a lane layout. Communication is critical between the event sites and the lane OIC. One OC should move with the convoy to give the event sites advanced notice that the convoy is approaching.

For this particular lane, the Sidewinder team emplaced four events for the convoy:

- A civil disturbance, consisting of a family wedding party shooting celebratory fire in the air.
- An inert IED placed along the convoy route.

## Convoy Live-Fire Exercise

By Captain Timothy R. Vail

During Vietnam, combat service (CS) and combat service support (CSS) units established “gun trucks” to protect the vital shipment of supplies from Vietcong ambushes along Highway 19, the only major hard-surfaced highway that led from Qui Nhon to An Khe. Rather than equip and train CS/CSS units with dedicated firepower to ensure self-sufficient security for the moving pieces of our pre-Operations Enduring Freedom and Iraqi Freedom CS/CSS force structure, the Army anticipated and trained for a linear battlefield where CS/CSS units would be secure from high-intensity threats based on their location on the battlefield.

The 507th Maintenance Company served as a report card for the Army in the well-published accounts of the events that led to the paramilitary ambush of the unit near the eastern part of Nasiriyah, Iraq, on 23 March 2003. The paramilitary ambush resulted in the deaths of eleven U.S. soldiers and the apprehension of an additional seven soldiers.

### Establish a Training Strategy

In response, NTC has established a training strategy for CS/CSS to train units to account for the 360-degree threat that makes up the contemporary operating environments (COEs) of Operations Enduring Freedom and Iraqi Freedom. Figure 1 shows the full spectrum of the COE at NTC. The capstone event of this strategy during an NTC rotation is the convoy live-fire exercise.

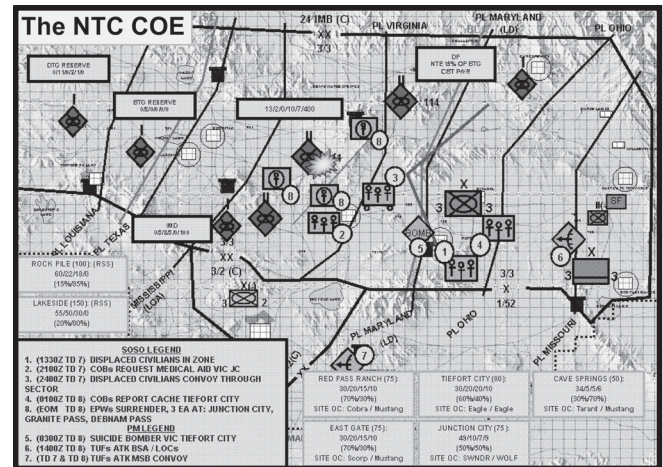
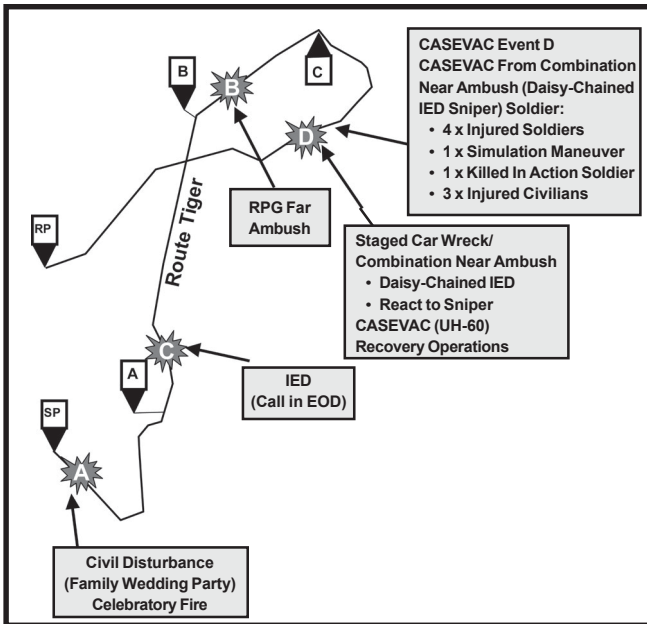


Figure 1. NTC Full-Spectrum COE

CSS units are required to analyze intelligence reports and the military aspects of terrain and conduct direct-fire planning and rehearsals for actions on contact as critical components of the troop-leading procedures (TLP) for convoys. As units execute their convoy operations, they must react to paramilitary threats that include improvised explosive devices (IEDs) and rocket-propelled grenades (RPGs) through effective direct-fire control. Additionally, units execute casualty evacuation (CASEVAC) and control as part of their actions on contact.



Convoy Lane Organization

- An RPG ambush.
- A staged car wreck, consisting of a daisy-chained IED and sniper ambush.

Based on unit reactions, OCs assessed the number and type of casualties. If aircraft were available, the unit requested air CASEVAC for the wounded. If none were available, the unit conducted nonstandard CASEVAC. Additionally, the Sidewinder team used a SimMan, a 190-pound mannequin—connected to a laptop computer—that can simulate the actions of a live human being with any type of injury. It is a great tool for providing immediate feedback to a medic or combat lifesaver.

### Conduct an AAR

OCs conducted the AAR at the release point of the route. An AAR could also be conducted after each event if the unit did not achieve the desired objective.

### Retrain

Any event could be reset at another location along the route if the unit failed to react properly during any of the events. To do this, the route must allow enough time for the event to be repositioned without impacting the unit’s movement. Additionally, the unit can stop, conduct an AAR, and retrain a particular event before continuing along the route.

### Summary

The lane allowed the convoys to train on different forms of contact, as well as land navigation, CASEVAC, recovery operations, and consolidation and reorganization activities. This ensured that the units were adequately trained before executing the convoy live-fire exercise that is also available at NTC.

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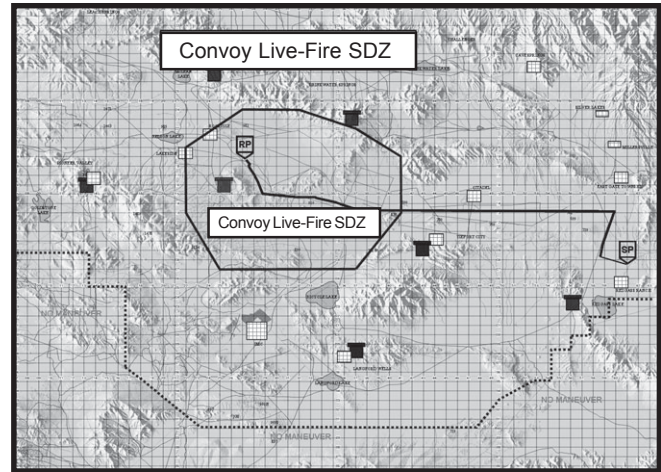
This live-fire scenario gives individual soldiers greater confidence in their weapons proficiency, small-unit leaders confidence in their control of direct and indirect fires, and platoon leaders confidence in conducting the critical aspects of the TLP that are required for CS/CSS units to maneuver throughout the COE. Recommended training objectives for convoy commanders and vehicle commanders, as well as home station training strategies to prepare units for a convoy live-fire exercise, are as follows:

#### *Convoy Commanders*

- Take advantage of terrain analysis route planning tools to identify terrain-based fire control measures and areas vulnerable to IED/RPG ambushes.
- Organize unit formations and vehicle orders of march to mass fires upon contact and employ the best weapons for the target.
- Ensure that well-established battle drills exist for—
  - √ Actions on contact (all eight forms).
  - √ En route vehicle jump plans.
  - √ Vehicle self-recovery plans (allocation and distribution of tow bars).
  - √ Casualty treatment and collection.
  - √ Calls for fire.
- Include terrain- and enemy-based fire control measures in the movement plan.
- Establish and rehearse a direct-fire plan:
  - √ Establish and disseminate direct-fire control measures to all soldiers (enemy locations, target reference points, fire patterns).
  - √ Assign sectors of fire integrated with unit formations and weapons systems location.
  - √ Disseminate well-established weapons control status and weapons safety posture.
- Integrate and rehearse indirect-fire support.

#### *Vehicle Commanders*

- Ensure that all weapons systems are assigned sectors of fire with clearly defined engagement criteria.
- Develop cross-leveling and reloading procedures for each weapon system.
- Issue vehicle orders, ensuring that threat, route, fire control measures, and contingencies are briefed to the crew and passengers.
- Actively control fires from their vehicle platforms.
- Know the surface danger zones (SDZs) for each weapon system on the vehicle and the sectors of fire for the other vehicles in the convoy to prevent fratricide. Figure 2 is an example of the NTC convoy live-fire SDZ.



**Figure 2. NTC Convoy Live-Fire SDZ**

#### *Home Station Training Strategy*

- Units can train convoy operations in preparation for NTC and Operations Enduring Freedom and Iraqi Freedom at their home stations.
- Installations that have the Engagement Skills Trainer 2000 can support CS/CSS units with collective fire direction and control tasks.
- Units can request short-range training ammunition and bolt adapters from their ammunition managers in order to fire the ammunition that will reduce SDZs of weapons systems to use multiuse ranges and develop their own convoy live-fire gunnery exercises.
- Units can conduct leader training on TerraBase/MicroDEM route analysis tools that will train leaders on identifying potential target reference points and ambush locations.

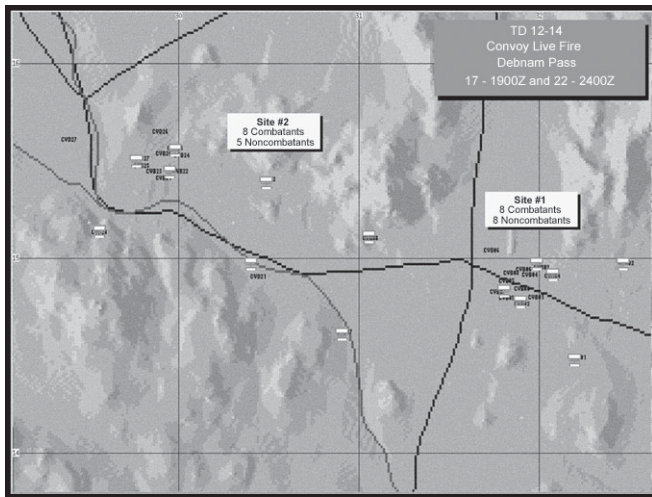
#### **Conduct the Exercise**

Following are some prerequisites for conducting a convoy live-fire exercise at NTC, as well as some suggested events to enhance training at NTC and the home station.

- Ensure that all firers participating in convoy live-fire events are qualified on their assigned weapon and have conducted stationary familiarization fires from their vehicles.
- Use limiting stakes for troops firing from passenger areas of vehicles.
- Use sandbags to enhance troop areas to increase stability of individual weapon systems.
- Ensure that each vehicle has a safety who can maintain visibility on all weapons.
- Ensure that vehicle safeties can maintain constant communication and monitor and supervise the execution of the proper weapons safety postures and direct-fire engagements.
- Conduct blank-fire dry runs before executing the live fire.

- Consider adding simulated IEDs, vehicular mobility kills, and CASEVACs to advanced convoy live-fire exercises.
- Allot time for vehicle safeties to conduct after-action reviews (AARs), as well as comprehensive AARs for the convoy as a whole.
- Use a video as much as possible to evaluate fire commands, engagement techniques, fire distribution, and command and control.

Figure 3 shows the target layout for a convoy live-fire exercise.



**Figure 3. NTC Convoy Live-Fire Target Layout**

### Summary

Due to the ever-changing COE and the dangers currently faced during Operations Enduring Freedom and Iraqi Freedom for even the simplest convoys, units must train on all aspects of convoy operations. NTC provides that training in a live-fire scenario for all CS/CSS units. Units will be prepared for the most dangerous situations by training in realistic conditions at home station as well as at NTC.

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## Geospatial Teams

*By Sergeant First Class Gregory T. Alston*

NTC is undergoing a tremendous change that makes up the contemporary operating environment (COE). New urban areas have been built to address and identify the challenge that today's soldier might encounter in deployments for Operations Enduring Freedom and Iraqi Freedom. In the past, units have looked at urban areas as obstacles and have chosen to bypass them. However, this paradigm no longer applies.

During stability operations and support operations (SOSO), units must enter towns to conduct cordon-and-search or attack missions, establish checkpoints within population centers, or conduct raids on possible paramilitary camps in and around towns. Commanders require that terrain experts (geospatial analysts) conduct thorough analyses of the terrain surrounding population centers as well as analyze the urban terrain enabling commanders to "see the terrain."

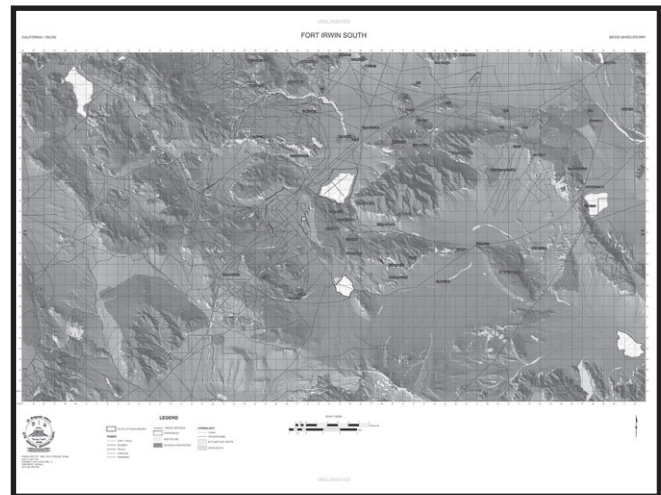
In October 2003, the first military occupational speciality (MOS) 21U40 geospatial analyst (formerly MOS 81T topographic analyst and MOS 81Q terrain analyst) team trainer arrived at NTC. This is the first time in the history of NTC that a geospatial analyst observer-controller has been on permanent staff in the Operations Group.

### Geospatial Team Trends

Most brigades or units of action (UA) deploy to NTC with a four-soldier geospatial team. Based on observations over the past six months, there are trends that units with these teams must address in order to better take advantage of this capability:

**Trend No. 1:** Modified combined obstacle overlays (MCOOs) are inadequate.

**Recommendation:** Use the Digital Topographic Support System (DTSS) to build and update the MCOO and use in predeployment training at the home station. Subordinate units must then provide feedback (bottom-up refinement) to geospatial teams based on observations "on the ground" so that the MCOO is continually updated and more accurate for the planning of future operations. Figure 1 is a sample of a MCOO developed on a DTSS by a rotational unit.



**Figure 1. Modified Combined Obstacle Overlay**

**Trend No. 2:** Brigade combat team (BCT) and UA staffs lack an understanding of geospatial team capabilities.

**Recommendation:** Incorporate geospatial teams into BCT/UA training as soon as possible at home station before deployment. This will allow the team to participate in as many planning processes as possible, enabling the staffs to recognize their capabilities and integrate them more fully. Figure 2 is an example of the geospatial team capabilities.

**Planning**

- Integration into intelligence preparation of the battlefield (IPB) – MCOO, line-of-sight/perspective views from templated enemy locations, route visibility plots to identify key terrain, and written analysis of the area of operation.
- Course of action (COA) development – Identification of COAs based on effects of weather and terrain; improvement of COA sketches to enable the commander to visualize the terrain.
- COA analysis – Support to wargaming through refined products from mission analysis; enemy line-of-sight/weapons range analysis from templated enemy locations; line of sight for BCT/UA collection assets, line-of-sight/weapons range analysis for friendly weapons systems.

**Preparation**

- Continued refinement of products – made available to subordinate units for their planning processes.
- Rehearsals – geospatial products such as blowups for terrain model/sketch map rehearsals.

**Execution**

- Imagery maps – for all subordinate commanders to fight from for their respective areas of operation, allowing them to “see the terrain.”
- “On-the-spot” geospatial analysis – for the battle staff in the BCT/UA command post, allowing them to make recommendations to the commander on the ground.

**Figure 2. Capabilities of Geospatial Analysis Teams**

**Trend No. 3:** BCTs and UAs have no standard operating procedures (SOPs) for “by-mission-type” terrain products.

**Recommendation:** Develop SOPs so that geospatial teams know exactly what products they must produce for certain mission types. Figure 3 provides a list of terrain products for the SOSO missions alluded to earlier in these notes.

**Raid on Paramilitary Camps**

- Overhead imagery to identify infiltration routes into the camps (see Figure 4).
- Perspective views of the proposed routes.
- Line-of-sight analysis from the enemy and friendly force locations.
- Line-of-sight analysis for Long Range Advanced Scout Surveillance System (LRAS3).

**Cordon and Search/Knock/Attack**

- Overhead imagery to identify routes into towns/cities.
- Perspective views of critical terrain surrounding towns/cities.
- Town layout and identification of key buildings (see Figure 5).

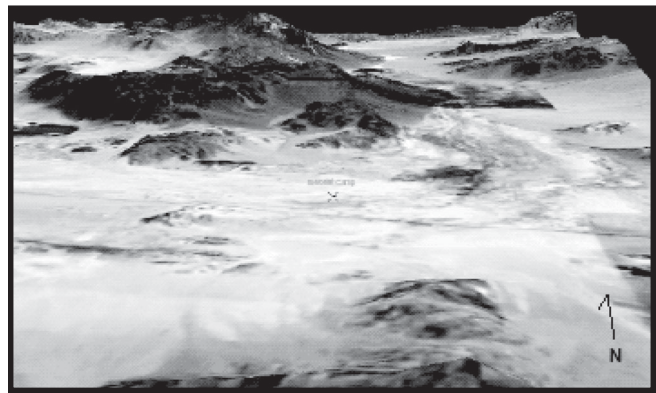
**MSR Reconnaissance and Clearance**

- MCOO (see Figure 1, page 37).
- Overhead imagery to clearly identify all routes connected to main supply routes (MSRs).
- Route visibility plots focusing on defile areas along the MSRs (see Figure 6).
- Gap-crossing products.

**Miscellaneous**

- Subterranean infrastructure (caves and tunnels).
- Water and electrical lines.

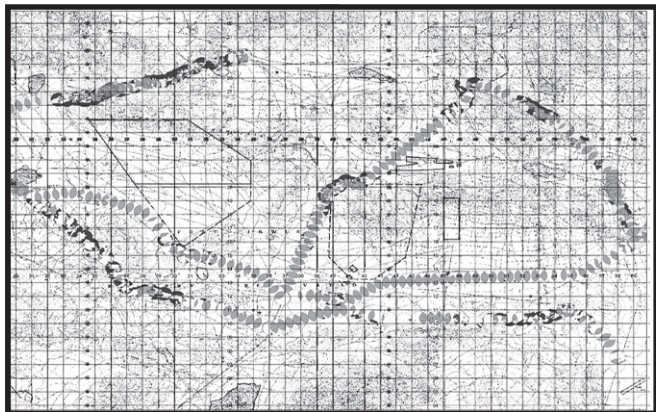
**Figure 3. Geospatial Team SOP for SOSO Missions**



**Figure 4. Perspective View of Terrain Surrounding Paramilitary Camp**



**Figure 5. Overhead Imagery of Urban Terrain Displaying Layout of Infrastructure**



**Figure 6. Route/Visibility Plot Along MSRs**

**Summary**

With the ever-changing COE, it is more critical now than ever that geospatial teams are trained and capable of enabling commanders and staffs to see the terrain. Through proper training on the DTSS, integration with brigade and UA staffs, and development of SOPs, geospatial teams can provide relevant input into SOSO or combat operations.

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