



# MCoE IED Defeat

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*Special points of interest:*

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(CAC login/ Registration may be required for link access)

## Current Events

*"There are no secrets to success. It is the result of preparation, hard work, and learning from failure." Colin Powell, 65th United States Secretary of State*

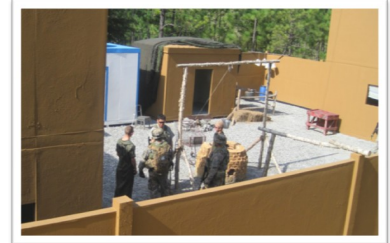
### Utilization of the New Home Station Training Lane's Afghan Dwelling

The utilization rate of the MCoE CIED Home Station Training Lane (HSTL) has continued to rise significantly. As Commanders deem these lanes crucial in their efforts to effectively train their Warfighters on CIED individual and collective tasks, the MCoE CIED Team continues their efforts to enhance the overall training capabilities and environmental atmospherics (enhancements to a training area designed replicate visual and emotional stimuli for the Warfighter) provided by the Home Station Training Lane and the CIED Training Facility located at Leyte Field.

The MCoE HSTL is approximately 4.1 miles of varied terrain, road surfaces, and is conveniently broken down into tactically relevant training areas. The lane is composed of forty-seven small urban structures, three culverts, a police station, a mock Home Made Explosive Lab, a twenty structure marketplace (that will undergo some atmospheric improvements in the next few months), and now the new Afghan Style Dwelling. The new dwelling layout consists of a mosque, (2) two tier structures, (2) two single tier dwellings (police station and doctor's office), an array of visual props (e.g., live stock, fruit stands, butcher's rack with meat, water well, etc.), and the entire dwelling is enclosed within the courtyard walls. The MCoE CIED Team is planning to incorporate an HME lab and additional training enhancing props within the next few months.

The new dwelling is conveniently located near Leyte Field (MCoE CIED Training Complex) where units can assemble in the classroom, occupy the Tactical Assembly Area, or brief Operation Orders around one of four sand-tables for preparation prior to conducting their CIED training events. The MCoE CIED Team stands ready to assist any unit with training on the HSTL or to assist commanders during training event planning or scheduling. We are equipped to provide SME support to the unit through the entire planning process to include: scenario development, determining training objectives, execute specialty training (HME Lab, Tactical Site Exploitation, Key Leader Engagements (KLEs), Search of High Value Targets (HVTs), etc.), and employment of IED pyrotechnic/non-pyrotechnic simulation devices.

Units can schedule the use of the HSTL Afghan Dwelling through the Range Facility Management Support System (RFMSS). In RFMSS, the HSTL is broken down into three areas: HSTL North, HSTL Center, and HSTL South. **NOTE: The Afghan Dwelling is part of HSTL North in RFMSS.** Units can request the entire lane or simply a section to support their training needs. The MCoE CIED HSTL Standard Operation Procedure (SOP) is available at Range Control Operations or through the MCoE CIED Team. All units utilizing the MCoE HSTL will be required to follow the procedures outlined within the SOP. Adherence to the SOP will minimize down time on the HSTL and allow Commanders maximum training time.



Warfighters of 3/1 CAV, 3rd BDE, 3rd ID conduct Key Leader Engagement mission during their Mounted/Dismounted CIED training event at the newest feature of the MCoE HSTL- the Afghan Dwelling.



## Emerging CIED Technology

### Silk Moth Inspires novel Explosive Detector

Researchers from the "Nanomatériaux pour Systèmes sous Sollicitations Extrêmes" unit (CNRS/Institut Franco-Allemand de Recherches de Saint-Louis), in collaboration with the Laboratoire des Matériaux, Surfaces et Procédés pour la Catalyse (CNRS/Université de Strasbourg) have designed a system for detecting explosives with "unparalleled performance" that was inspired by the unique characteristics and capabilities of a silk moth's antennas (see right insert image).

The silk moth (*Bombyx mori*), capable of reacting to the capture of just a few pheromone molecules. Its antennas are composed of strands of around one millimeter in length, bearing a large number of sensilla, micrometric sized organs directly connected to the sensory neurons. It is this structure that the researchers sought to imitate.

According a CNRS press release in Paris: *The system comprises a 200-micron long and 30-micron wide silicon micro cantilever. This support has been nanostructured with around 500,000 vertically aligned titanium dioxide nanotubes. The role of these nanostructures is to multiply the surface area of the micro cantilever by a factor of around one hundred and to proportionally increase the chances of capturing the molecules being searched for.... To test the performance of this device, the researchers released very small quantities of TNT in a controlled manner. In this way, they were able to establish that the sensitivity of the device was 800 ppq (800 molecules per million billion molecules (10<sup>15</sup>). No current device is able to detect such low concentrations of explosives. These performance levels are similar to those of trained sniffer dogs.*

(Click [here](#) to read more)



Silk moth antennas (depicted in large photo) are unique in nature and according to experts this can be imitated can utilizing micromechanical sensors with optical signal detection to detect low levels of explosives. Smaller photos illustrate Silicon micro cantilevers modified with a three-dimensional layer of vertical titanium dioxide nanotubes.

The *Centre National de la Recherche Scientifique* (National Center for Scientific Research) is a government funded research organization, under the administrative authority of France's Ministry of Research. CNRS laboratories (or research units) are located throughout France, and employ a large body of tenured researchers, engineers, and support staff.

(Click [here](#) to read more about CNRS)

## Fort Benning CIED Training

### Armor Basic Officer Leaders Course (ABOLC): IEDs in Patton Hall

The future "Tip of the Spear" leaders of K Troop, 2/16 CAV (ABOLC) recently received an IED threat session with a global perspective. The MCoE CIED Team responded to a training request that asked for IED related training that built upon lessons the young leaders had received in Officer Candidates School (OCS) and West Point. Taking into consideration the experience of the target audience (several former OCS graduates had received training from the CIED Team before) and with the intent to build upon existing skills and knowledge, the presentation addressed the following topics: CIED Facts, Current Global IED threats and cross border sharing and spread of successful TTPs, IED "Operators", CIED Principles including ROE, IED basics: components and types, Actions upon IED detection (CAGE, 3Ds, 5-25s, 5Cs, 9 Line IED/UXO report), and CREW Systems overview for both Mounted and Dismounted platforms. The session added another dimension to reinforce instruction by demonstrating how quickly a device can be built and emplaced, and the fiendish employment of unwitting members of the audience during the Suicide Borne IED (SBIED) portion.

The session was closed out with a brief overview of several beneficial courses offered by the MCoE to include Advanced Situational Awareness Training (ASAT) and the new Dismounted C-IED Tactics Master Trainer Course. To schedule your next CIED training event please contact a member of the MCoE CIED Team at 706-545-5298 or 706-544-6246.



Warfighters of K Troop 2/16 Armor Basic Officer Leaders Course conduct IED Awareness Class with MCoE CIED Team member at Patton Hall. Earlier this month, K Troop was provided IED Mounted React to Contact simulations (VBS2) training at Leyte Field.

## Fort Benning CIED Training (cont)



### Alpha Company 1/19<sup>th</sup> IN, Mounted React to Contact Lane (MRTC)

The MCoE CIED Team assisted Alpha Company 1/19<sup>th</sup> IN during their Mounted React to Contact Lane (MRTC) training event. CPT Bell and 1SG Torres requested assistance developing an IED scenario for the unit's exercise lane conducted at the MCoE Homestation Training Lane (HSTL) North Afghanistan Dwelling (I7). The commander's intent was to familiarize the Trainees with Mounted Maneuvers and Reacting to an IED attack. Alpha Company 2/29<sup>th</sup> IN provided the unit with two HMWWVs and a Stryker. The following tasks were trained; (05-3-D0017) React to an IED while Maintaining Movement, (05-3-D0016) Conduct the 5 Cs, (05-3-D0019) Conduct the 5 and 25 Meter Scan, (05-2-3091) React to possible IED, VBIED, SVBIED, or PBIED Attack .



Alpha Company 1/19<sup>th</sup> mission was to travel to the AFG dwelling and eliminate a time-sensitive High Value Target (HVT) that presented a clear and present threat to friendly forces. In addition, the element was briefed to expect heavy resistance from the enemy force. It was emphasized to the Trainees that the overall combat mission was to accomplish the commander's intent and to execute the mission effectively and in a timely manner.



The patrol was hit with an IED in route to the AFG dwelling, where terrorist combatants immediately delivered suppressive fire to prevent the squads from entering the simulated dwelling. Upon gaining entry into the dwelling, the Trainees were expected to recognize particular tactical, technical, procedures (TTPs) employed by insurgents and adjust their actions for clearing operations in close quarters and two level structures. In the second phase, which occurred outside the dwelling, a PBIED was encountered. The gunners had to identify or mitigate the threat through informed judgment (use of ROE/EOF) and neutralize the target, if necessary.



The CIED Team emplaced the FOX SCOPIS Pyrotechnic Device on both sides of the road, which alternated strikes between the first and second vehicle. Each vehicle provided suppressive fire, killing the triggerman. The latest enemy TTPs were incorporated into the emplacement of the devices and played a role in the triggerman's location. The unit executed 12 iterations.

## CIED Training Tips

### Back To Basics



On today's geographically diverse battlefields, our Soldiers are engaged in a fight that can be very complex and ever changing. The improvised explosive device (IED) is the most dangerous weapon the enemy has in its arsenal. Regardless of the geographical location or the IED's design, the signs remain the same. There are many factors that lead to the success in the discovery of an IED. First, education is the key to making our Soldiers aware of the seriousness of the IED, what CIED enablers are available, and how to employ them. Teaching the five components and being able to identify the device in various stages of construction can stop the device from ever being put into play (IED Awareness Classes). Second, situational awareness can help us protect the patrolling unit by watching for the change in the terrain and being able to spot anything out of place (Channelize, Aim Markers, Ground sign, Environmental or CAGE). Third, rehearsals of the unit's actions once a device is discovered will ensure that each Warfighter understands what is expected of them and what needs to take place (5 Cs). Finally, once the mission is complete a thorough debrief must be submitted to ensure that all data is captured to aid the next patrolling element.



## CIED Team Key Events

- Assist in construction of the new C-IED classroom at the Leyte Field facility.
- Provided IED Global Threat Awareness for students of the Maneuver Senior Leaders Course and the Armor Basis Officer Leader Course.
- Supported the Mounted and Dismounted C-IED training lane events for 3/1 CAV.
- Participated in telephonic working group of portable Afghan RCIED jammer system.
- Continued training lane support for both Infantry and Armor School courses and units.
- Submitted recommended content changes for TRADOC “Common to All” CIED lessons.
- Responded to training related RFIs from various CoEs.

## Path Forward

- Host a Department of Homeland Security briefing at Bldg 8070 on Leyte Field (Oct 16-17).
- Provide Global IED Threat sessions to the M-SLC and OCS.
- Support the CONUS Replacement Center (CRC).
- Respond to RFIs regarding MCoE CIED training submitted by the Joint Services.
- Remain flexible, adaptive, and proactive in the team’s efforts to provide the latest relevant training to the Warfighter.
- Share TRADOC “Best Practices” for training with the Force.

## CIED Team “Behind the Scenes”



## CIED Team Lead Comments

The CIED Team has been very busy the past few weeks upgrading our training facilities. Any of you that have been out to the MCoE CIED training facility on Leyte Field have probably noticed a lot of construction activities (Ref: The photos in the above section). The CIED training facility currently has a 40 seat virtual training classroom that also served as a C-IED enabler awareness training site. Based on training demand for the facilities, the MCoE has decided to expanded the CIED training facility with the addition of another classroom to directly support CIED enabler training. In the very near future this site will be able to facilitate a complete maneuver company, with three operation platoons, at a time. One platoon can train on virtual systems , another platoon can be receive classroom instruction on various CIED enablers (i.e. CREW/Thor III, Man Portable Line Charge, etc.), and the third platoon can conduct mission planning, PCC/PCIs, and rehearsals at the sand tables or move through the IED stations located on site adjacent to the sand-tables.

The MCoE CIED Team is on-call to support any unit requesting CIED training or Subject Matter Expert (SME) assistance during field training. To schedule training contact, Tom Dale at 706-545-6577, [thomas.l.dale.ctr@mail.mil](mailto:thomas.l.dale.ctr@mail.mil) or Jerry Niggemann, [gerald.e.niggemann.civ@mail.mil](mailto:gerald.e.niggemann.civ@mail.mil).



### Quick Links:

[RFMSS  
Homepage](#)

[OEF Training](#)

[CALL UTTP  
Bulletin 2011-02](#)

[ROC-IED  
Training Link](#)

[RAPID Reports](#)

[Marine Corps  
Center for  
Lessons Learned](#)

[CREW Training](#)

[Attack the  
Network  
Homepage](#)

[West Point  
Negotiation  
Project](#)

[Commander’s  
Handbook  
For Strategic  
Communication  
and  
Communication  
Strategy](#)



Tom Dale



# MCoE IED Defeat

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L to R: Mr. Fairchild, Mr. Perry, Mr. Black, Mrs. Rivera, Mr. Francis, Mr. Molina, Mr. Freeman, Mr. Dale, Mr. Repicky

### Training Support provided by the MCoE CIED Team

### Links of Interest

- Joint IED-Defeat Organization @ <https://www.jieddo.dod.mil/>
- KNIFE Training site @ <https://jknife.jieddo.dod.mil/pages.knifepublic.aspx>
- Center for Army Lessons Learned @ <https://call2.army.mil/>
- Combined Arms Center @ <https://ctd.army.mil/external12/BSTPs/ied-tsp/index.asp>
- Directorate for Counter IED: <http://www.wood.army.mil/dcied>
- Army CIED Professional Forum <https://forums.army.mil/SECURE/CommunityBrowser.aspx?id=131710&lang=en-US>



3/1 CAV Night Operations on HSTL South.

### Around the World

(IED topics from around the world)



An "Insurgent's view" of Stryker Leaders Course on HSTL North.