



# Mine and Explosive Ordnance Information Coordination Center Operations in Iraq

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Since Desert Storm in 1991, U.S. forces have operated in numerous foreign areas—to include Kuwait, Somalia, Bosnia, Kosovo, Afghanistan, and Iraq—littered with land mines and the explosive devices of war. Each of these countries presented a unique set of explosive hazards, enemy activities, environmental conditions, and operational requirements for our soldiers. In each case, U.S. forces participated as part of the joint and multinational coalition community, often including military and nongovernmental organizations.

Historically, each area of operations might have had an ad hoc Mine Information Coordination Cell (MICC) to track explosive hazards, coordinate safe military movement in mined areas, support force protection through hazard awareness training, and occasionally provide oversight of indigenous demining activities. If humanitarian demining operations were active in the region, the United Nations often established a National Mine Action Authority (NMAA) to coordinate Mine Action Center (MAC) operations in theater.

Unfortunately, the U.S. Army does not have procedures or a doctrinal organization to conduct MICC operations, which often results in regional improvisation and diversity among units. Minefields and hazards might be tracked with Excel® spreadsheets, FoxBASE®, Access database, or Microsoft® PowerPoint® slides and a grease pencil. Often, relations between military MICCs and humanitarian demining activities were hostile, or at least strained. Coordination between coalition partners and U.S. ground forces had no common baseline for information dissemination and cooperation.

Anticipating these problems, U.S. Central Command (CENTCOM) Coalition Forces Land Component Command (CFLCC) staff engineer section (C7) contacted the U.S. Army Engineer School Countermine/Counter Booby Trap Center (CMCBTC) at Fort Leonard Wood, Missouri, for help in designing a theater MICC for Iraq and developing a training plan for its implementation. The C7 recognized that an active, functional MICC was needed to support military operations in Iraq, stabilize the nation, and reconstruct the country. It would



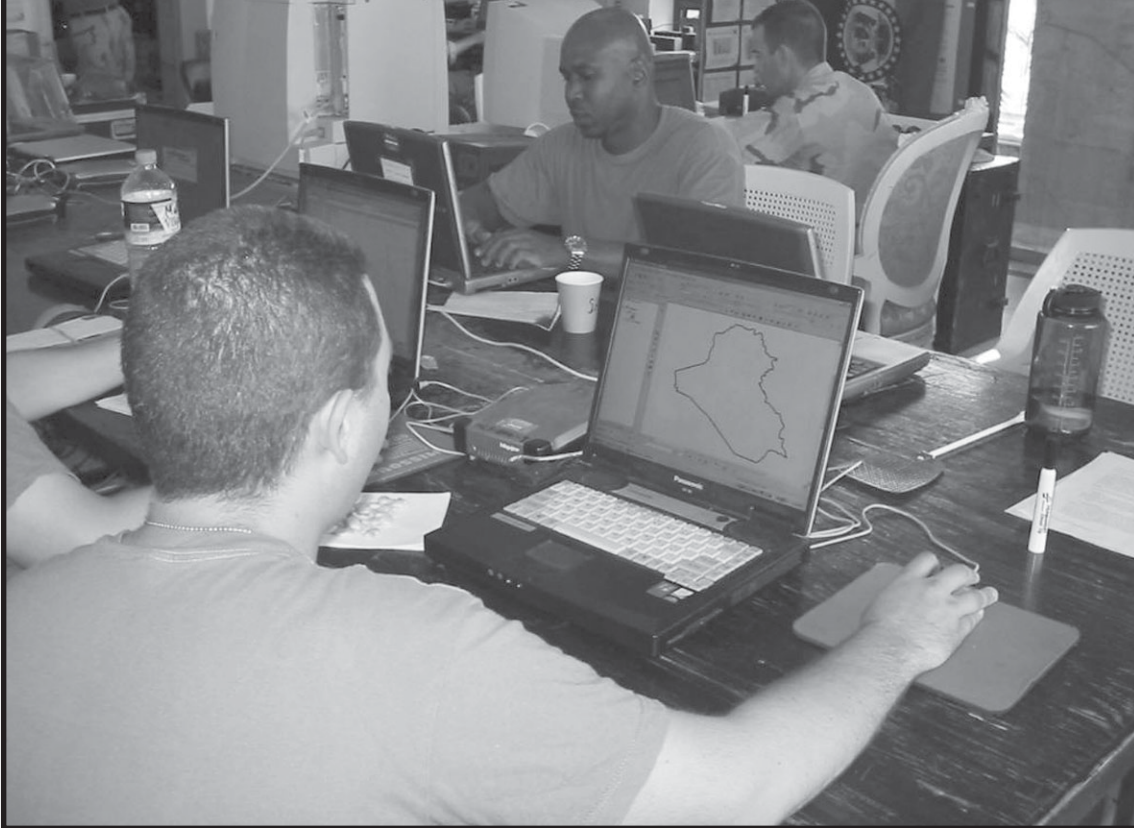
**Soldiers of the 203d Engineer Battalion train to find mines as part of the extraction drill process. This helps soldiers safely extract themselves if they inadvertently enter a minefield.**

# Report Documentation Page

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**Tactical Minefield Database System**

require coordination with all ground forces and joint U.S. and coalition militaries, as well as humanitarian agencies, the United Nations, and numerous nongovernmental organizations.

Eventually, the Iraqi theater MICC was named the Mine and Explosive Ordnance Information Coordination Center (MEOICC) and its mission assigned to the 1138th Engineer Battalion (Missouri Army National Guard) on 31 March 2003. Since the MEOICC was a new concept, and the 1138th was designated as the first prototype, the unit was reorganized to satisfy the requirements of a MEOICC. The 1138th concluded its predeployment training at Fort Leonard Wood with a three-week MEOICC operations course presented by the CMCBTC. Training included tracking mines and explosive hazards with the Tactical Minefield Database (TMFDB) System, MICC operations and procedures, mine awareness instructor training, engineer-specific instructor training, United Nations demining operations and standards, information collection and analysis, incident investigation, an overview of mine detection dogs, and other topics to enable them to conduct their mission. Also, key members of the staff traveled to Bosnia to examine operations in an active MAC/MICC before departing for Iraq.

The 1138th Engineer Battalion deployed into theater on 23 May 2003 and was augmented with a U.S. Marine Corps explosive ordnance disposal (EOD) staff sergeant, a Mongolian captain, a Ukrainian major, and an Australian major to constitute the MEOICC. Throughout Operation Iraqi Freedom, the MEOICC provided a common operational picture (COP) and situational awareness of all known explosive hazards to enhance force protection and the operations of coalition forces. This information was provided to all coalition forces and to NMAA humanitarian operations that involved mines,

unexploded ordnance (UXO), improvised explosive devices (IEDs), and booby traps in order to minimize injuries to friendly forces and civilians. Through the efforts of the 1138th, countless lives have been saved. Units have better awareness of explosive hazards in the area, and through explosive hazard awareness training, soldiers understand how to respond to explosive hazards.

The TMFDB was indispensable for tracking minefields, UXO, and IEDs. The system is based on ArcGIS™ (civilian software) and allows analysis of explosive hazards with greater ability than previous methods. (Historically, MACs had little ability to locate, track, and portray explosive hazards.) The TMFDB team provided geospatial products for the Coalition Joint Task Force-7 (CJTF-7), major subordinate commands, Task Force Restore Iraq Electricity, the captured enemy ammunition cell, the NMAA, and elements of the Coalition Provisional Authority. The TMFDB team posted overlays using Command and Control Personal Computer (C2PC) software, shape files for use in ArcGIS and FalconView™, spreadsheets containing explosive hazard data, and maps showing demining nongovernmental organizations working in theater.

A variety of units used this information. Brigade combat teams accessed information about nongovernmental organizations working in their battlespace. Since this information became available in late July 2003, there have been no incidents of coalition forces mistaking nongovernmental organization personnel for opposition fighters. (There had been one incident before this process was enacted.) The C5 Strategy, Policy, and Plans Section regularly uses TMFDB data to analyze IED attacks in the planning process, and the data was often used to prepare for military operations.

The MEOICC also included an Explosive Hazard Awareness Team (EHAT), which evolved over the deployment. At the outset, the program of instruction focused on mine and UXO awareness, but it soon became obvious that IED awareness training was critical. The officer in charge of the team and his trainers developed IED training to incorporate into the explosive hazard awareness program of instruction. Over seven months, the EHAT trained 4,500 soldiers on explosive hazard awareness and trained 279 soldiers as EHAT instructors for the brigades. These instructors undoubtedly caused a cascade effect in the number of soldiers trained. The Center for Army Lessons Learned has pushed an updated training package produced by the EHAT for use at all continental United States (CONUS) replacement centers. Again, the efforts of the MEOICC have helped to better protect U.S. and coalition forces.

Throughout the deployment, the MEOICC communicated with CJTF-7 entities such as the C3 Center for Army Lessons Learned, the C3 Training Cell, the IED task force, and the Topographic Cell and provided an electronics specialist to support the Combined Explosives Exploitation Cell (CEXC). The MEOICC improved information-sharing among the CEXC; EOD battalions; C2 (Intelligence) Coalition Analysis and Control Element; C5; the Antiterrorism Force Protection Agency, the National Ground Intelligence Center; and the IED task force. The result was a series of tactics, techniques, and procedures posted on the Secret Internet Protocol Router Network (SIPRNET) and Combined Enterprise Regional Information Exchange System (CENTRIXS) Network for subordinate units to improve force protection. Results speak for themselves. Since 1 October 2003, there has been a 5 percent reduction in the number of forces killed and wounded in action from IED attacks. On the other hand, the percentage of IEDs found has increased by 14.6 percent.

From deployment into theater until February 2004, the MEOICC played a pivotal role in the distribution of the Interim Vehicle-Mounted Mine Detection (IVMMD) System and the Buffalo mine-protected clearance vehicle. The operations section orchestrated the movement of these vehicles into theater for IED reduction in support of Task Force Right of Way, which uses the IVMMD, the Buffalo, D-7 dozers, and additional equipment to clear the shoulders and medians of main and alternate supply routes. Task Force Right of Way was first organized and tested in the 4th Infantry Division (4ID) area of operations. From 31 October 2003 to 9 January 2004, the percentage of IEDs found increased from 45.5 percent to 74.6 percent in the 4ID area of operations. Members of the MEOICC have frequently communicated with the Program Manager-Close Combat Systems to discuss additional technologies that could defeat IEDs.


While MICCs have existed in the past, this was the first time that a military unit was formed to support full-scale communication between civilian demining organizations, track explosive hazards in theater, conduct low-level analysis of

data, and provide explosive hazard training. The MEOICC provided two liaison officers to communicate with the NMAA. The MEOICC developed a system to draw captured enemy demolitions for distribution to the nongovernmental organizations. The demolition stockage was critically low until this system was put in place. Now nongovernmental organizations draw captured enemy demolitions from bunkers maintained by NMAA and protected by coalition forces. This has greatly reduced the number of explosive hazards and UXO capable of injuring or killing civilians and coalition forces, while saving coalition explosives resources.

The cooperation and assistance provided by the MEOICC to the NMAA and other civil activities have brought considerable respect and support from numerous humanitarian agencies. These agencies have credited the U.S. Department of Defense and CENTCOM with supporting the reconstruction and humanitarian efforts of the international community.

The 1138th Engineer Battalion also provided critical support to the C7. The logistics section organized hand receipts of all equipment purchased for the C7. The communications section designed the network schemes, installed wiring to support more than 120 C7 computers, ensured that systems functioned, and supported other units during the deployment. The section also established nightly videoteleconferences for the C7, which enhanced the ability of the engineers to stay synchronized across Iraq.

Additionally, the driver team provided security and transportation for the C7. These soldiers conducted convoy briefings, researched appropriate routes, trained personnel on communications requirements, and drove personnel throughout the theater. Without the support of the 1138th Engineer Battalion, the C7 would not have been as productive in its efforts.

In summary, the 1138th Engineer Battalion performed exceptionally well during its deployment and has laid the foundation for future operations and the establishment of MEOICC/MICC doctrine. Its contribution to the fusion of explosive hazard information, production of the COP, and explosive hazard awareness training has saved lives and combatted attacks from roadside bombs. This valuable commodity significantly supported planning for joint and coalition operations, helped bridge the gap between military and civil operations, and ultimately supported national objectives. 

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