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Initial Impressions Report

May 2004 No. 04-13

Operation Iraqi Freedom

Information Operations

Civil Military Operations

Engineer

Combat Service Support

Stability Operations – Support Operations

Center for Army Lessons Learned
Fort Leavenworth, Kansas 66027-1350

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EXECUTIVE SUMMARY

Three times as many U.S. Soldiers were killed since the end of hostilities in May 2003 as were killed during combat operations. Combat operations and force protection operations remain as relevant and critical during Phase IV as during Phases I-III.

A multitude of challenges face Army forces presently in and out of theater. Our models of how to man, equip, and train the force for offensive operations do not link up across the board when dealing with stability (and support) operations. Our current doctrine deals with a linear battlefield and unified phases of operation. Our Soldier skill sets are focused on the primary mission; conversely, on-the-job training is being used today in theater to prepare Soldiers to plan and execute missions that were looked at before as secondary or tertiary.

Great advances are being made in understanding cultural issues at local levels. Battalion- and company-grade officers are challenged to understand and manage issues dealing with the Iraqi people with little or no training to support their decisions. A highlight to the tenacity of these Soldiers is their ability to overcome a lack of training in understanding to execute political and strategic objectives.

Current Iraqi sentiment has evolved from personal relationships between Coalition Soldiers and Iraqi citizens. Because these relationships differ from location to location and person to person, it is hard to correlate events and actions with relationship successes or failures. An armor task force commander in Baghdad described his methodology as that of plotting and measuring everything: "After a positive or negative event, he would have his staff evaluate all actions they had conducted before, during, and after the event. This would allow him to correlate activities with outcomes and develop TTP (tactics, techniques, and procedures) for future success." While not all actions provided equal measures or correlating events, this methodological approach helped establish a base line of comparative success for his task force. It allowed him to utilize the Army approach of BDA (battle damage assessment) in regard to stabilization and support operations. This task force was very in tune with the local Iraqi populace in their area of operation. A bond was built and cultivated over many months resulting in a trust between the military and civilian population. As a result of this established relationship, a new anxiety has developed due to the impending transfer of authority (TOA). The local leaders inquired about the replacement force and their capability to "be as good" as the current command. The incumbent task force felt it imperative to pre-build success in established events so that the new command could capitalize on their past positive efforts. Obviously all of the effort and work to continue positive momentum would be conducted by the current command. The local population would see the new command arrive and continue to demonstrate success from the start due to the seamless transfer of authority. This is an example of a positive exchange and establishes a template for future relief in place (RIP) operations that guarantees support from the local community.

While thankful for the removal of the former regime elements (FRE), to include Saddam Hussein, the local populace has a short memory of their past lives. They tend to be focused on the current issues and have a reasonable need for communication. Language barriers pose a difficult task for all levels in this effort. A missed intent in local negotiations can mean future significant problems in dealing with other issues. A poor communication effort may alienate a local company commander and cause significant problems in future community negotiations. It is imperative that communications be clear and effective and that all concerned are aware of its implications.

In the Iraqi Operational Environment (IOE), success in civil administration requires an understanding of Iraqi religious and tribal institutions and their relationship with the secular

forms of government inherent to democracy and proposed by the Coalition Provisional Authority (CPA). Furthermore, U.S. plans and practices cannot be successful in the absence of a knowledge and understanding of Iraqi sentiments and perceptions. This is all the more important given the high turnover of CPA personnel and the lack of regional expertise held by the majority of Coalition military and civilians in Iraq. Although nominally running Iraq, maneuver commanders are generally not trained in the complexities and subtleties of the area. This has resulted in some U.S. practices serving to alienate common Iraqis who initially supported the Coalition. To partially rectify this, some OIF units have sent division and brigade commanders and staff to Jordan to receive instruction on how to operate effectively in Arab/Muslim Iraq.

Despite the excellent work done by numerous Soldiers to make parts of the information operations (IO) campaign work effectively, Phase IV IO is executed sporadically in OIF. A vertically integrated, horizontally synchronized IO campaign simply does not appear to exist. Some U.S. units understand and use the concepts of setting objectives, developing themes, and setting measures of effectiveness (MOE). Others do not understand the process and therefore are just conducting operations without any measure of success or failure. Some commanders use tactical psychological operations (PSYOP) teams (TPTs) as a reactive measure when negative second or third order effects occur. Most IO battle drills are reactionary in nature.

U.S. commanders grapple with the concept of information operations across the range of military operations. While some affirm that this is an IO fight and that it should be the priority for Coalition efforts, others believe that IO is not an option, but that offensive operations should be the main effort of this stability operations phase.

IO doctrine does not meet the needs of commanders in an operational environment for a variety of reasons discussed in the IO chapter. IO does not seem to be integrated into the Army's Officer Education System (OES), Warrant Officer Education System (WOES), or Non-Commissioned Officer Education System (NCOES) on a consistent or standardized basis. Furthermore, IO does not appear to be incorporated into most collective training events, either as a doctrinal component of collective training or as a component of training assessment.

Soldiers are performing functions vastly different from those on which they have trained; this continues to be a challenge. This is prevalent with almost every MOS in the theater. All Soldiers are being asked to perform infantry missions/operations for which they have received very little training. They have had to learn through an on-the-job training program that has little room for forgiveness, but it has become their dominant routine. The challenge to hone their skills for successful mission accomplishment has been formidable. The performance of combat engineers is a perfect example. They are continuing to conduct their primary missions of mobility, counter-mobility, and survivability but now include direct infantry tactics required by operations such as cordon and search and move to contact. Route clearance, improvised explosive device (IED) detection, elimination of captured ammunition, and unexploded ordnance disposal have also become primary missions. The shortage of trained explosive ordnance disposal (EOD) personnel and EOD detachments has made the engineers a force multiplier in this area of operations. Engineers in one brigade combat team (BCT) have detonated over 80,000 tons of unexploded ordnance (UXO). Their vertical and horizontal skills are being employed to satisfy requirements in support of combat operations and host nation building. Remarkable performances are being realized throughout theater. Negotiation skills and management of funds now become a requirement at the company command and higher levels. Young commanders are contracting for construction and materials and beginning projects that will assist in future community relations. These types of skills are not trained in the traditional officer and noncommissioned officer school systems. On-the-job training has become the norm. The only hesitancy relates to the personal desire to accomplish the process "right." A young company commander described his experience in acquiring materials for road and bridge construction. Because the local population knew that culvert pipe was required for the project, the price escalated. Upon questioning the vendor, it became apparent that local family needs, combined

with community requirements, caused the temporary inflation. Everyone was trying to line their pockets because they felt no one was paying attention.

Commander's emergency response program (CERP) funds were provided to commanders to allow them to make improvements in their communities that will have a direct and positive impact. Some have completed school improvements; others purchased equipment for the civil defense forces or local police departments. Others were able to hire garbage collectors or improve roads in and around town. Because of the flexibility offered by this system, commanders can listen to their district or neighborhood advisory counsels and spend their funds in areas that will have the most positive effect. In many cases the goals attained may not be closely associated with the national strategic plan, but the benefits derived paved the way to better human understanding and relations.

Weapons of terror are still the method of choice for the opposition. IEDs and vehicle-borne improvised explosive devices (VBIED) are the weapons of choice. These devices and methods of employment are becoming increasingly sophisticated. The terrorists utilize TTPs of their own. They are watching and monitoring traffic patterns and looking for the obvious: regularly scheduled convoys or troop movements. They seem to have minimal intelligence on key visitor movements. The devices being used are better disguised, continually improved, and detonated with more precision. Current methods include the use of remote devices (car remotes and garage door openers). The trigger mechanisms are now being delayed for maximum effect. During one particular event, the terrorist detonated an IED, injuring a Soldier. Knowing his comrades would be quick to respond to the injured troop, he waited for additional Soldiers to show up and detonated a second explosion which produced multiple injuries. These methods have a large psychological effect on our troops. They need to be able to respond to a wounded comrade but are slowed by the possible impact of moving too quickly.

Our Soldiers are becoming more aware of their surroundings and different signs. As one commander coined, look for "the absence of the normal or the presence of the abnormal." This situational awareness can save lives and provide valuable intelligence that might help eliminate a terrorist threat.

It is impossible to prepare for mortar and rocket attacks. Knowing the locations of bomb-proof bunkers is probably the most important deterrent. Most attacks occur between 1800 and 2400 hours because the terrorist can work under the cover of darkness but not be noticed because other personnel are still moving around. Most attacks are inaccurate. Most of the mortar and rocket devices are launched through PVC pipes laid on sloped berms and pointed in the direction of known Coalition force locations. They can be fired individually or in volleys. Coalition forces have been very successful in vectoring launch locations and apprehending the launch personnel.

Supplying, maintaining, and sustaining the force has presented new and interesting opportunities and challenges in this theater. Water requirements are based on camp population and other water demands based on services provided. A BCT under the current Force XXI is unable to store and distribute water by virtue of its MTOE. Their solution was to create the "camel rack."

High saline content in the raw water has posed challenges in the operation of the reverse osmosis water purification unit (ROWPU). The lack of an adequate supply of repair parts and chemicals has had an impact on mission accomplishment. To facilitate receipt of repair parts, many units were able to acquire the parts at home station and have them shipped via the postal service. This method circumvented traditional logistics channels but guaranteed delivery of parts and supplies critical for mission accomplishment. It appears that the automated systems supporting logistics have been stretched to their capacity.

COMPENDIUM OF PHASE IV OPERATIONAL EFFORTS IN IRAQ

- U.S. plans and practices cannot be successful in the absence of a knowledge and understanding of Iraqi sentiments and perceptions.
- Diverse AORs present a command and control challenge for the development and implementation of centralized IO campaigns and CMO plans.
- Measures of effectiveness and criteria of success are not unified or aligned to strategic or operational goals.
- CERP funds provide relief at all echelons for nation building and force protection.
- Focus on tactical eradication of terrorist elements is hard to balance with phase IV operations.
- Basic Soldier skills are the most relevant aspect of operational and tactical needs. All Soldiers, combat support, and combat service support are conducting cordon and search operations along with tactical convoys and actions on contact.
- Company-grade and below are the most responsive and adaptable to the changing environment and understanding the culture.
- Operations tempo is tremendously challenging with secondary effects.
- Weapons of terror are a major concern to troop morale: IED, VBIED, and rocket and mortar attacks.
- The automated systems supporting logistics are stretched to their capacity.

FOREWORD

Mission:

The Center for Army Lessons Learned (CALL) formed and deployed a nine-member CAAT to Iraq (02 FEB to 03 MAR 04) to collect CJTF-7 lessons learned and provide those lessons learned to the visited units, future rotational units, and the U.S. Army.

Intent/Guidance:

- Initial focus on phase IV operations with specific views toward CMO activities to include engineering, civil affairs, logistics, and information operations
- Focus at brigade and below
- Bring back useful products (TTPs, checklists, staff matrices and procedures) that will assist future deploying units

Execution:

A nine-member team arrived in Kuwait on 02 Feb 04. The team focus was on Phase IV operations and the CMO activities generated in this phase. Additional members were focused on logistics, engineering, and information operations.

The team received information briefs from the 4th Infantry Division on 05 Feb 04 located at Tikrit, then visited with subordinate units of 1st BCT. The team then moved to Balad at Logistics Support Area (LSA) Anaconda on 09 Feb 04 to observe 3rd BCT. The next movement was conducted on 12 Feb 04 for observation of the 2nd BCT located at Baqubah. On 15 Feb 04, the team arrived at Baghdad International Airport (BIAP) in the 1st AD's AOR and received an information brief on the operational situation at the battle update brief (BUB). On 16 Feb 04, the team met with 354th CA BDE, USACE representatives, and CJTF-7 IO personnel in the green zone. On 18 Feb 04, the team was briefed by the 2nd BCT of 1st AD and conducted interviews with two subordinate task forces, 1-35 AR and 1-6 IN. The team returned to Baghdad on the evening of 20 Feb 04, conducted appropriate interviews with the division main (DMAIN) and departed BIAP on the 21st to Multi-National Division (southeast), the British sector in Basrah. On 26-29 Feb 04, the team attempted to out brief CJTF-7 to no avail and moved to Kuwait on 01 Mar 04 at Camp Wolverine. On 02 Mar 04, the team interviewed the RCERT out of Camp Dohah to gather computer network operations (CNO) as part of the IO campaign. The team departed Kuwait on 03 Mar 04 with arrival the same day at Fort Hood, Texas. The team was billeted overnight with follow-on travel to Fort Bliss for out-processing and final product construction. The entire team linked up at Fort Bliss, Texas on 04 MAR 04 for out-processing. The Fort Leavenworth CALL analytical element met the team at Fort Bliss to save time in the writing of this Initial Impressions Report (IIR). The team spent the next few days out-processing and compiling the data to send to the field. Upon completion, the team redeployed to home station on 09 Mar 04.

Acknowledgements:

Special thanks are extended to all of the commanders and staff officers who assisted us during this trip. The team had unlimited access to information, but more importantly, to the leaders themselves who offered their valuable time so that this product would be useful to future deploying units.

Chapter 1
Information Operations

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Summary

The doctrinal concept of information operations (IO) as a combat multiplier seems to be universally misunderstood at nearly every level of the Army. The common misconception of IO is that it is another staff stovepipe with undefined and unresourced missions, a vertical staff effort that does not seem relevant to combat operations. Conversely, effective IO is simply a horizontal synchronization effort. This effort aligns all the unit's extant functions and operations to the commander's intent for the purpose of defeating the adversary through information superiority. In other words, IO simply synchronizes the great things we already do – operational security (OPSEC), civil affairs (CA), psychological operations (PSYOP), public affairs (PA), electronic warfare (EW), physical destruction, intelligence (INTEL), deception, computer network attack/computer network defense (CNA/CND), and many more – in order to successfully accomplish the mission. IO is also vertically integrated with higher and lower IO plans.

IO doctrine does not provide sufficient guidance for operations in the Iraqi operational environment (IOE). During Operation Iraqi Freedom (OIF), units and staffs have had to develop numerous methods of planning, synchronizing, and executing IO that are not addressed in doctrine. **FM 3-13, *Information Operations*** (November 2003) describes the various IO elements, the supporting/related activities, their linkages/capabilities, and has a heavy emphasis on the integration of IO in the military decision-making process (MDMP). It lacks, however, much information on how IO officers should do their jobs. In other words, doctrinal tactics, techniques, and procedures (TTP) do not translate into operational TTPs. **FM 3-13, *Information Operations*** states, "Effective IO is an integrated effort that synchronizes the effects of [core] IO elements/ [supporting and] related activities to accomplish specific objectives designated by the commander." The goal of IO is to gain and maintain information superiority. This condition aids commanders in seizing, retaining, and exploiting the initiative. IO is a commander's operation. The commander and staff's input and involvement are critical to a successful IO program.

Phase IV IO was, at best, executed sporadically in the IOE; this does not demean the excellent work done by numerous fine Soldiers to make parts of the IO campaign work effectively, which some certainly did. A vertically integrated, horizontally synchronized IO campaign simply did not appear to exist in the IOE. Since it did not exist, it was not possible to execute, despite the tremendous efforts on the part of those who participated. Some U.S. units have a firm grasp on setting measures of effectiveness (MOE) and are using them. Others do not understand the process and therefore just conduct operations without any measure of success or failure. Some commanders are using tactical PSYOP teams (TPTs) as a reactive measure when bad second or third order effects occur. Most of the IO battle drills in theater are reactionary in nature. They

are essentially afterthought, implemented when things do not go according to plan in kinetic operations.

Throughout the IOE, U.S. commanders grapple with the concept of IO across the range of military operations (ROMO). This is evident from many statements made by commanders. Some affirmed that this is an IO fight and that it should be the priority for Coalition efforts, while one commander stated that the only way to eliminate the insurgency was to kill every one of them. Another stated that we will not be able to win the hearts and minds of the Iraqis, but may be able to win their minds; in their hearts, they will always hate us. Yet another commander stated that IO was not an option, but that offensive operations should be the main effort.

Battalion commanders are dealing with a multitude of issues which impact the unit's ability to conduct effective IO. Units are heavily involved in the communities in their area of operations (AO). They are dealing with all of the local leaders, restoring infrastructure including institutions such as schools, hospitals, and utilities all while dealing with force protection measures and the likelihood of daily attacks. In Phase IV, where units and resources could be devoted wholly to stability operations (SO), units find themselves committed to offensive operations and maintaining a defensive and sometimes distant posture from the locals.

Several issues emerged from the observations, visits, and documentation review:

I. Commanders and staffs generally do not understand the IO process or its relevance, simplicity, and applicability as a combat multiplier. IO is, again, a staff synchronization effort that aligns the activities and messages of a command for the purpose of gaining and maintaining information superiority (IS); IS is simply the use of information to accomplish friendly objectives and prevent the adversary from accomplishing his objectives. Unfortunately, some U.S. commanders seem to believe IO is either a product that PSYOP units create, a civil-military operation, or just talking points. Not one single officer interviewed was aware that OPSEC was a core element of IO. In fact, not one unit visited had a person assigned as the OPSEC officer. Currently, it is difficult to gauge whether actions taken in theater are producing IS.

II. Doctrinal IO focuses on the operational level, that is, the combatant commander, land component commander (LCC), and corps levels. Resources follow doctrine, and the operational levels are where the scarce IO resources have been applied. In IOE, however, the focus of stability operations IO is appropriately placed on the civilian populace, tribal leaders, mullahs, and other unconventional warfare leadership. It is precisely at these critical nodes that the resources are either nonexistent or extremely scarce – the very levels at which they are needed the most. This doctrinal disparity precludes consistent, programmatic application of IO throughout the various organizational levels of IO planning and execution.

III. Currently, the FA-30 course only addresses IO in the MDMP. The program of instruction (POI) for FA-30 needs to encompass a much broader perspective and to include information about how IO is to be implemented at the tactical and operational levels of war. Most of the current doctrine in **FM 3-l3** includes only broad philosophy on IO full spectrum operations at the strategic level. Changes to the POI should include a better understanding of the implementation of the core, supporting and related roles of IO, such as TPTs, CA teams, PA, EW, and military deception (MD). There should also be sufficient practical exercises in the art of non-lethal targeting and setting measures of effectiveness (MOE). The FA-30 instruction should also teach IO officers how to produce IO situation templates (SITEMPS) and analysis for inclusion in intelligence preparation of the battlefield (IPB).

IV. IO needs to be addressed in the curriculum of all officer education system (OES) courses. It is imperative that officers at all military educational levels (MEL) have a good understanding of IO concepts, elements, and practicality. This would contribute significantly to understanding, accepting, and incorporating IO into Army operations and culture.

IO doctrine is still in its infancy, with tremendous potential as a combat multiplier. To bring about change within the Army as a whole, IO must be incorporated into all phases of the OES. It must receive equal attention and detail in the POI as the battlefield operating systems (BOS). IO functional area training must include more training and education in the synchronization of IO elements. IO training for officers needs to encompass more than integrating IO into the MDMP. If they are to integrate, synchronize, and coordinate all the IO elements in combat operations, then these officers need to have full understanding of the scope, capabilities, and limitations of those assets. Unit level exercises - warfighters, mission rehearsal exercises (MREs), and combat training center (CTC) operations - need to have all elements of IO incorporated into the scenario. Commanders need to exercise their staffs in an environment which produces second and third order effects based on kinetic operations.

Chapter 1: Information Operations
Topic A: IO Synchronization Methods of Units

Observation Synopsis

The information operations working group (IOWG) and unit targeting boards are two of the most common methods used to affect IO synchronization. With limited IO staffing at the division level, and none at the brigade and below level, staff officers developed innovative methods to plan and execute IO, as well as to evaluate the success of IO in the context of the overall operation. Different units adjusted their battle rhythms to maximize the use of the IOWG and the targeting process. Units varied in the frequency of conducting IOWGs and targeting boards.

There is no doctrinal method for the format or conduct of the IOWG; it is unique to each unit's area of operations (AO). At the brigade and below level, for example, the PA officer and CA planners/executers have a much bigger role in the conduct of IO, often in its execution. The IO cell has no dedicated IO officer, so the command typically designates an officer to fill that function. At one brigade, the FSO filled the function of the IO officer, and the "core" IO cell consisted of the IO officer, PSYOP planner, PAO, and CA planner, along with S2 and S3 representatives and the unit's combat camera noncommissioned officer in charge (NCOIC). Although none were IO trained, this IO cell was very effective in developing and executing an IO plan. OPTEMPO kept them from meeting on a regular basis, so they would conduct an IOWG as needed to develop support plans for pending operations. Through these meetings, the brigade developed some tactical deception plans in response to insurgent activities during raids. Insurgents were able to use human intelligence resources to gain advance notice of a pending raid; they would watch the gates when the strike force departed and phone ahead to warn their cohorts. The plans they developed and executed delayed the insurgent's decision-making process on how to respond, resulting in successful raids for the unit.

Senior leader involvement is especially helpful, as it keeps the unit's key leadership updated on the unit's IO activities and allows them a venue to offer guidance and feedback. Also, general officer/commander involvement ensures maximum participation from the various unit staff elements. One division IO officer was effective in involving senior leaders, but did it through a venue different than the IOWG. Once a week, she and the PAO personally briefed the assistant division commander for support (ADC-S) on their IO activities. This update worked very well for this particular unit, but a potential disadvantage is that the absence of other staff elements during the update may result in a less complete picture of the IO effort than if the staff is present.

Ideally, the IO cell should conduct short-, mid-, and long-term planning to support the commander's overall campaign. However, the IOE often dictates otherwise, keeping staffs in a reactive mode. This reactive mode seems to be more exaggerated the lower you go in echelon. At the brigade and below level, staffs primarily focus on the short-term versus any kind of long-term planning. Available, actionable intelligence drives the short-term planning, and units have to adapt to these short-term requirements in order to develop plans that support quick fire missions. Staffs on the ground were able to successfully overcome these reactive missions through effective staff coordination. One division used talking points to successfully outline the left and right limits of the brigades by establishing the division's position in certain areas, i.e. leader engagement with the local Iraqi political, religious, or economic leaders. Additionally, this division would participate in its higher headquarters "IO summits," which was a successful method other units could use in their IO planning and execution.

Lessons Learned

- Units devised and used a variety of formats and structures for the IOWGs and targeting boards to evaluate success of an operation; they found one that worked for their command that encompassed all aspects of success and failure. Determining the criteria of success, or measure of effectiveness, was a critical mission of these groups.
- Good working relationships among the staff are imperative for effective IO synchronization; successful IO used the IOWG and targeting board to build these relationships. They made the meeting agendas relevant, and facilitated maximum participation from all the staff elements.
- The use of PA talking points is an effective means of providing broad guidance to subordinate units in IO synchronization, current themes, and IO focus. The IOWG and targeting board were used in the successful IO programs to vet talking points among the staff.
- Quarterly IO summits assisted headquarters, across the board, in synchronizing IO. Conducted either by live conference or video teleconference, these meetings allowed the IO officers and planners the ability to leverage other units' successes and adapt them to their AO.
- An effective method of conducting IOWGs is to integrate the meetings into the unit's battle rhythm.
- Senior leader involvement in the IOWG and overall targeting process leads to successful vetting of the IO program; staff participation worked well during senior leader updates.
- Many units found effective workarounds to offset the disadvantage of not having an IO officer; some units dual-hat a staff officer. Using the FSO in the IO officer role worked well for some.
- Some units successfully used a targeting board specific for IO and CA target development. This board allows the unit to focus on non-lethal fires and leverage the intelligence available. G2 representation in the IOWG and targeting board is critical for successful IO.

DOTMLPF Implications

Doctrine: Review, revise, and fuse Joint and Army IO doctrine to address IOWG development, staffing, and processes.

Leadership and Education: Unit leadership is the center of gravity for successful IO; leaders must understand and require IO in order for IO to function as a successful combat multiplier.

Organization: Add appropriate personnel and equipment to unit organizations/modified table of organization and equipment (MTOE) in order to accomplish the IO mission.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
IO Synchronization and Timeline	10000-05242
IO Long and Short Term Planning	10000-09792
Staff Relationships	10000-16128
Division IOWG and Targeting Boards	10000-62208
IO Coordination	10000-20563
Division IOWG	10000-02822
Brigade IOWG	10000-18576
IOWG	10000-11449
IO Planning	10000-33389
Staffing	10001-16788
Staffing2	10000-72556

Chapter 1: Information Operations
Topic B: Information Operations and Intelligence

It is typical for many different staff sections (S2, IO, S3, etc.) to request the tactical PSYOP team (TPT) to collect information in different areas. Some of these requests were specific questions and some were ongoing collectables. The TPT detachment commander, working with the staff representatives, would develop his own priority intelligence requirements (PIRs) that would cover the spectrum of the information required by the different staff elements. One example of this PIR occurred after the lead Iraqi Shia cleric, Sistani, issued a press statement calling for immediate elections. They developed and answered these PIRs and passed the information up through the daily PSYOP situation report (SITREP). This information was valuable not only to the higher HQ, but also to national strategists. PIRs are normally developed by the S2/G2, and approved by the commander. In this case, the detachment commander is working "outside the box" in developing his own PIRs and collecting on them. Also, it shows the importance of building strong interpersonal relationships with the various staff officers within the command to establish good working relationships.

TPTs at brigade level use face-to-face and word of mouth as the best ways of communicating with the local population. They have discovered that they need to use tactics, techniques, and procedures (TTPs) that are outside the conventional Army way of conducting business. For example, they have found that locals are much more receptive when the Soldiers are engaging them in a uniform without helmet, body armor, and load bearing equipment (LBE). This may sound like common sense; however, force protection measures require them to maintain this uniform when outside the compound. PSYOP at the tactical levels can benefit from the ability to operate unconventionally. Another example is that dedicated security can have great benefits over relying on a combat patrol for security; combat patrols have a specific mission which will take priority over providing security for a TPT. Current force protection requirements necessitate more personnel, weapons, and vehicles than what a TPT would traditionally have by MTOE. TPTs have worked around this by teaming with counterintelligence (CI) teams. Each team will provide security for the other while conducting their missions. The similarity of their missions allows them to share intelligence.

U.S. divisions do not maintain a central database or conduct human factors analysis on all entities that play roles in their AOR, such as civic leaders, religious Imams, terrorists, and insurgents. Human factors analysis is currently conducted at the national level by the Defense Intelligence Agency. There is no mechanism for conducting this task at the operational or tactical level. As a general rule, the IPB process lacks with regards to IO. U.S. forces understood who Saddam Hussein and his commanders were and how they operated, but did not understand all the other parties at play once the war came to a conclusion, such as tribal leaders, local leaders, and Imams. They had very little information about them. Through a process of trial and error, U.S. forces have formulated a picture of these leaders within each battalion's AOR.

In one U.S. division, the G2 has charted all the enemy leaders in his AOR. The G5 knows who the civil leadership is. PSYOP knows who all the key communicators are. However, these three databases are not shared. Thus far no one has the manpower to take ownership of it. The G2 does not want it because they are only tracking Former Regime Loyalists (FRLs) and adversaries. The G5 does not want it, because they are only tracking community leaders, and the PSYOP units do not want it because they do not have the manpower. No one is capable or trained to do human factors analysis which, according to **FM 3.13, *Information Operations***, is defined as actions taken to influence other's decision-making processes. To affect or influence adversary decision-making, commanders need to have this level of analysis down to the tactical level. Commanders and staff are making some progress at their level. However, no one is collecting this information into a central database to develop a true picture of the whole AOR

and to develop an organized analysis. They are overcoming it by trial and error. The IOCOORD believes it would it be helpful at the division level to conduct tactical level human factors analysis.

Lessons Learned

- The development of PIR to support the IO program encourages and facilitates establishment of good working relationships.
- Soldiers' interaction with the populace can have tactical, operational, and sometimes strategic implications. TPTs engage the populace and provide information that normally can only be answered by operational/strategic assets.
- PSYOP at the tactical levels benefit from the ability to operate unconventionally.
- The divisions are inadequately staffed to conduct the appropriate link and pattern analysis to benefit commanders at the tactical level who are conducting IO, and there is limited capability to maintain a central database for capturing all information pertaining to all leaders within the division's AOR. As a result, battalion and brigade commanders are learning the AOR by simple trial and error.
- To be successful at the operational and tactical levels, human factors analysis level of information must be available to division, brigade, and battalion commanders and staffs. Currently, all human factors analysis is conducted by the Defense Intelligence Agency on strategic or national-level personalities.

DOTMLPF Implications

Doctrine: Include the use of human factors analysis in doctrine as a tool of a successful IO process.

Training: Incorporate Soldier interaction with local populaces as a standard template in all training events related to ROMO.

Organization: Add appropriate personnel and equipment to unit organizations/MTOEs in order to accomplish the IO mission, to include the link and pattern analysis process.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Non-Traditional Collection	10000-22464
IPB Process	10001-05468

Human Factors Analysis	10000-03924
IO PIRS	10000-13728
OSINT Media Analysis	10000-25805

Chapter 1: Information Operations
Topic C: Public Affairs and the Media

Some U.S. units are conducting media analysis, despite no doctrinal requirement for a PAO or S1 to do so, and it has been very valuable to commanders. In addition, Soldiers that are acting as the PAO have not been trained in PA or in conducting media analysis. One brigade PAO maintained every news piece that was written about her unit, which was a useful tool for dealing with future visits from organizations that report either positively or negatively. On the positive side, the unit may want to maintain a relationship with the media and leverage them when they need to get a release for a story. In one particular unit, the reporter really embraced the unit and it led to public relations benefits. On the negative side, units can see who the unfriendly or hostile organizations are, or the ones that tend to report false information. That gives them an advantage in developing COAs for dealing with the media in the future. For example, units can simply deny them access to embed or be prepared to debunk any false information they release.

The biggest impact the media has on the battlefield is relaying to the public what is actually happening on the ground. Some units put a lot of energy into working with the media and it paid off in dividends. They went beyond simply accommodating the media to actually integrating/ embracing them into the unit. The PAO emphasized the good news events ongoing in the unit's AO. The establishment of the Iraqi Civil Defense Corps (ICDC) was a concept that was very useful in countering negative publicity. Establishment of the ICDC reinforced the Coalition message that we are working to rebuild their country and turn it back over to them. There are great benefits to embracing the media. It is human nature to lean more positively toward people or an organization that treats you right. There will still be media coming to units with a preconceived agenda, counter to U.S. interests, and working to satisfy that agenda. It is important to work with the media, whether they have an agenda or not, because they are going to get and report their story one way or another. Embracing the media has greatly assisted U.S. forces in communicating our message.

Many times, media will report or focus on only the negative things that are ongoing in an AO. A U.S. brigade commander made an insightful comment that is very relevant: "The media are not there for us. They are there to sell a product. And it seems to me that more often than not, it has to have a negative twist to it to cause enough sensationalism to sell." This brigade's PAO was very active and aggressive in knowing what was going on in her AO. For example, she would go on missions with their CA assets which gave her an understanding of the good things going on. It paid off well. When media would put out a negative piece in an area, she was able to counter it by getting other media out to the areas and having them report on ongoing positives such as school restoration or re-openings. One of their biggest challenges was getting out the good news stories.

One PAO was aggressive in encouraging media to venture out during the day. Usually, members of the media would tend to focus on combat operations at night and miss out on all the operations that were ongoing. The PAO was very persistent in this encouragement and it paid off. Major media outlets such as ABC and AP covered these stories. One of the biggest challenges was getting the media to bring and wear the proper uniform/equipment for force protection purposes. Again, this was overcome by the fact that the unit would actually integrate the media into the unit. The unit would normally in-brief all embeds, which included an AO brief, force protection requirement, and so on. Once again, persistence paid off.

Translation was also a challenge. All the media could speak English, but at times subtleties in the language were missed in translation. The PAO would work to overcome this by finding personnel within the unit that spoke the language and have them present when the journalists were interviewing. This not only helps for translation purposes, but people tend to be friendlier

if they have someone around that speaks their native language. Units were also accepting of foreign journalists. They found it was a benefit to have them on our side. They also brought in outlets that are traditionally hostile to our operations, such as Al Jazeera. Again, the media will get their story one way or another, so it was helpful when we gave them our side.

One PAO used some innovative techniques in dealing with foreign/international journalists. The PAO hosted a media luncheon with key media players including foreign and U.S. journalists from the *New York Times* and *Los Angeles Times*. The discussion during the luncheon was informal, and toward the end, one of the unit's Generals (GO) will answer questions both on and off the record. This kind of event gives a unit the ability to get the whole story out to the press from the unit's pewrspective. There is always GO involvement at these luncheons. The PAO stated they have been able to mitigate several things that may have come up in the press by use of these luncheons. The luncheons have been held at a former Republican Guards Officer's Club, which has been converted to a rest and recuperation (R&R) center for the Soldiers.

This PAO also set up an open house for the local Baghdad correspondents. As they saw with other Iraqi journalists, the local media had very little training or experience in how to do real reporting. This event helped them see the kinds of things the Coalition was doing, as well as some of our capabilities and equipment. They had static equipment displays and offered Blackhawk rides. They also got all the contact information for the journalists so they could use them for future events. The PAO stated they have never had a problem with the media releasing information designated as "off the record." One GO reminded the PAO to be careful and not get too relaxed in dealing with the media, the implication being that the media still have their own job to do, and a lot of times they are pursuing an agenda that often conflicts with the missions the Army is conducting.

In the summer of 2003, one unit established a media operations center (MOC) in Baghdad, which is used by both IO and PAO personnel. The MOC serves several functions, but is primarily a work area for the IO and PAO staffs. They hired several locals as interpreters. One innovative action of the PAO was the establishment of a journalism school for local Iraqi writers. When the MOC was established, local Baghdad journalists were hired to write articles for division-sponsored periodicals. The journalists were not well-schooled in journalistic techniques because of all their training and experience with the former regime. The division set up a six-week journalism school for the journalists to give them a good base knowledge in media correspondence. The PAO NCOIC ran the school. The journalists worked primarily for the IO section, as most of their work was oriented toward the Baghdad population.

U.S. division IO staff has developed relationships with numerous newspapers in their AO. As a result, they use them as a method of getting their messages to the local population. The IO officer is very aggressive in writing articles on significant events and running them in the newspapers. The articles normally have about a 2-3 day turn-around time from submission to publication. They also use these papers for public service announcements. In one article, they commented on the Coalition Provisional Authority's **Article 19, *Freedom of Assembly.*** Although they use several newspapers, they use the biggest three to get the most distribution. These are *Al Sabah, Al Manar,* and *Azzaman*.

One brigade requires its subordinate units to write articles for the local papers. This is well-received by the local newspapers, because it takes a lot to put out a paper everyday. The locals welcome the assistance. Each week, the task forces turn in a local good news story from their AO. The brigade IO officer submits these for publication in the paper. They will include pictures as well. The local newspapers all have internet addresses, so the IO officer will just send them the story to include in the next edition via the internet.

One PAO stated that it would be beneficial to integrate IO/PA/CA play into the mission rehearsal exercises (MRE) in order to develop and sustain a solid working relationship. This

PAO observed that such integration did not take place in the MREs leading to this deployment. Several of the brigade level PAOs (additional duty appointees) offered that the brigade MTOE should authorize a trained PAO slot to that level.

Lessons Learned

- Some PAOs, even though not trained, are conducting media analysis and deriving benefits from it. PAOs need to be trained in media analysis.
- It is important to develop good working relationships with the media. Always be cautious and avoid releasing sensitive/classified information.
- An advantage of embedded media is that many of them embrace the unit; this translated well into future reporting on the unit.
- Training local Iraqis to be journalists and then using them to write stories in Coalition periodicals has proven to very successful.
- Developing good relationships with local host country newspapers is an effective method for distributing IO messages. Local papers in host country nations want to make money and fill out all of the pages just like in the United States.
- All elements of IO should be incorporated into MREs and warfighter exercises (WFX). The scenarios should force the IO elements to interact with each other, the staffs, and the supported commander.
- The PAO should be a full-time authorized MTOE position at brigade level.

DOTMLPF Implications

Doctrine: Include the use of an operational analysis (OA) cell in doctrine as a tool of a successful process to develop and analyze measures of effectiveness (MOE).

Doctrine: Incorporate the integration of the goals and objectives, from Coalition Provisional Authority (CPA) level to tactical unit level, into the development of the IO goals, objectives, and themes.

Organization: Review and revise BCT and below organizations/MTOEs to incorporate necessary personnel and equipment, to support new doctrinal concepts (when approved), such as OA cells and MOE feedback databases.

Training: Incorporate robust development of MOE and collection plan integration of the MOE into training scenarios and events.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Brigade Media Analysis	10000-09139
Media on the Battlefield	10000-02419
Media on the Battlefield	10000-08467
PA Training	10000-06989
Dealing with Foreign Media	10000-86659
Media Operations Center	10000-09792
Using Media to Send IO Messages/Themes	10000-57120
Newspaper	10001-89805

Chapter 1: Information Operations
Topic D: Measures of Effectiveness (MOE)

Information Operations (IO) measures of effectiveness (MOE) is one of the biggest challenges in developing a good IO campaign strategy. The Iraqi Operational Environment (IOE) is characterized by varying degrees of success and methodology in this effort. This is largely due to the decentralized and diverse areas of operation (AO) and the lack of formal training in developing MOE amongst the staff.

Specific indicators to measure IO effectiveness are extremely hard to establish. One of the more effective methods to use is face-to-face interaction with the targeted audiences to gain feedback. Assets used to conduct face-to-face include unit patrols, PSYOP teams, and CA assets. CA personnel are one of the more effective face-to-face assets to use to gain feedback from a targeted audience. They have an advantage in that their mission requires them to establish a rapport with the local population. Although CA teams are not doctrinally intelligence collectors, CA teams in the field have provided feedback from the local population to their unit S2s for inclusion into a database.

These feedback databases can be an excellent source for IO personnel to use to develop indicators of success/failure of IO conducted and to aid in their MOE analysis. S2s should be included in the IOWG. Dedicate and incorporate intelligence specialists into the IO cell for MOE analysis. These specialists must also stay plugged in to the S2/G2. They also must have a base knowledge of IO in order to develop and analyze MOE.

One U.S. division uses both subjective and objective criteria for measuring effectiveness in its IO operation. Each of these is tied to a specific IO objective, which in turn relates to one of the four pillars identified by the Coalition Provisional Authority (CPA). These four pillars include governance, economy, military, and infrastructure.

This unit has established a website on the SIPRNET exclusively for the IO campaign plan. On this site, there are many products pertaining to the plan, including IO estimate, IO objectives, and MOE. Each of the IO objectives has specific MOE listed underneath. The MOE are measured by green, amber and red status. Each of these is monitored by the brigades, and the IOCOORD updates the MOE each week. The IOCOORD assesses how the division is doing with regard to each of these goals each week. It is virtually impossible to collect on each of the goals, nor is there a way to collect on all these things without putting additional requirements on an already over-tasked unit. Therefore, the IOCOORD makes this assessment based on his understanding of the AOR and feedback from the brigades.

Another division in Southern Iraq uses an operational analysis (OA) cell for the development and analysis of MOE. Although the questions run the spectrum of operations, it has a heavy emphasis on IO. The unit uses weekly surveys to query population samples throughout the AO. They then take the results and analyze the trends that occur over time. It is a continuous Iraqi attitude survey and is conducted by an independent civilian scientific research organization. This has two advantages:

(1) The research organization provides trained, dedicated personnel to perform the task, and

(2) Since they are not in the unit's chain of command, the organization can be the honest broker.

We observed that when dealing with statistical analysis, data can be used to provide a picture other than reality. The survey consists of approximately 20-30 questions, and includes overall

climate attitude questions such as, "What do you think of what the Coalition is doing?" and, "When do you think Coalition forces should leave?" They use their own unit patrols to conduct the surveys, but have recently begun to hire local Iraqis and train them in survey techniques in order to conduct the surveys. This will provide a wider range of population to sample and should prompt the locals to provide more honest answers. Other sources used in their operational analysis are patrol reports, campaign effectiveness data assessment, and reporting (CEDAR), political advisor (POLAD) reports, and intelligence reports.

A U.S. maneuver battalion near Baghdad uses graphic depiction of security and infrastructure events matched with their goals and objectives to measure their effectiveness. Their brigade headquarters has goals/objectives which they call lines of operation. The battalion is nested underneath that with key tasks (KTs). The KTs are further broken down into collective tasks that support each of the KTs. Security is measured by number of incidents, IEDs, demonstrations, weapons firing, etc. This is graphed to show the decline or rise in incidents by sector. If there is an increase, the battalion looks at what was done differently. If there is a decline, then it will be similarly investigated. The battalion also looks at anti-Coalition graffiti or flyers, random weapons firing, and IEDs. These are the information requirements (IR) on which the patrols report. In the KT of civil infrastructure, the battalion evaluates details such as the number of hours of electricity or water available per day and the frequency of trash pick up in the neighborhood. Some of the criteria in these areas are rather subjective in nature, but provide additional tools for analyzing the operational environment.

The unit has clearly identified indicators in their sector to measure security and infrastructure needs which are matched with their campaign goals and objectives. The KT are measurable and can be graphically depicted to show rises or declines in overall compliance by the Iraqi people. The battalion commander is directly involved in this process, which gives it the credibility and leverage desired to make this a good program for the staff and company commanders.

Lessons Learned

- One of the most effective methods for obtaining data for use in measuring IO effectiveness is face-to-face encounters with targeted audiences. Units can use patrols, PSYOP teams, and CA teams to gain this essential feedback.

- Incorporating IO MOE into the collection plan will provide the necessary information for input into the IO feedback database. The feedback database can then be used to develop indicators of success/failure of the IO plan and aid in the MOE analysis.

- The SIPRNET website is a good tool for units to use to share data regarding the MOE of the IO campaign. The unit makes subjective analysis using feedback from subordinate units to evaluate MOE.

- One unit successfully used an OA cell, supported by data from an independent organization, to survey the local population and provide operational assessments.

- The use of both subjective and objective criteria that are nested beneath the division and the CPA's goals and objectives has worked well in measuring the effectiveness of one unit's IO campaign.

DOTMLPF Implications

Doctrine: Incorporate the concept of embedded media into doctrine. Successful embracing and integration of the embedded media paid huge dividends to many.

Doctrine: Incorporate planning and execution of PA TTPs at the appropriate tactical level units in order to support IO planning and execution.

Doctrine: Incorporate the concepts of local/host country media support into PA and IO doctrine. Integrate local/host country journalists into PA operations and support them in their mission to provide news for their news media.

Organization: Add PA personnel and equipment to applicable unit organizations/MTOEs in order to plan and execute PA TTPs at tactical level.

Training: Incorporate integration of embedded media, support of local/host country media, and interaction with all IO elements into training scenarios and events.

Leadership and Education: Incorporate the concept of IO integration into the Army's education systems; the concept that "not everything has to be killed or destroyed in order to execute a successful mission" is necessary for successful operations across the ROMO.

Materiel: Develop and resource the force with Joint and Army IO automation tools that provide commanders and staff a common IO operational picture and uniform IO planning tool.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
MOE and Assessment	1000-33869
Intelligence Collection to Support MOE Analysis of IO	1000-14882
Measures of Effectiveness	10000-54320
Operational Assessment	10000-23755
MOE 2	10000-57815

Chapter 1: Information Operations
Topic E: IO at the Division

The current MTOE for a maneuver division includes positions for a G7. The G7 section provides for an assistant chief of staff for information operations and five staff support positions. None of the division level units in the IOE were staffed with these personnel. All U.S. units interviewed were utilizing one officer in the IO coordinator (IOCOORD) role: an O-4/major. Only one of the several IOCOORDs interviewed has received any formal IO training.

One U.S. division utilized an information operations working group (IOWG) to coordinate and synchronize their IO efforts for several months after cessation of major combat operations. It was chaired by the IOCOORD and the members were mostly lower-level division staff officers, such as the PYSOP commander and public affairs officer (PAO). The IOWG is no longer conducted. The IOWG became dysfunctional because the appropriate staff elements were not present at the meeting. If the group were chaired by a member of the command group, the IOWG would have been more successful. The effects coordination cell (ECC) has taken its place. The IOCOORD firmly believes that IO should be the priority in their current operations. Even though he believes this should be the priority, no senior staff has ever participated in the IOWG. The division fire support team coordinator (DFSTCOORD) incorrectly stated that IO was civil military operations (CMO). He further incorrectly related that IO/CMO was being taken care of at the ECC effects tasking order (ETO) meeting with key staff members who were responsible to each of the ministries within the Coalition Provisional Authority (CPA).

Before deploying to Iraq, the commanding general of one U.S. division sent a request to the Department of the Army (DA) G3 requesting additional IO support for the division. This request was denied by central command (CENTCOM). As a result, this division did not have the resources to conduct IO properly. The IOCOORD does not believe the mission was properly resourced or supported by DA or IO proponency. The IOCOORD firmly believes that they need an FA-30 trained officer at the brigade level and not someone who has the job as an additional duty. Another staff officer is going to focus on his primary role and think about IO secondarily. The S2s and fire support officers (FSOs) have done a very good job in Iraq as the IO officers in their brigades. The FSOs were underemployed in some areas and have a done well with targeting. However, they do not understand the interrelationships of all the components of IO. IO is much more than targeting.

In contrast to this division, another U.S. unit has a battle rhythm with an IOWG on its calendar three days a week (Monday, Wednesday, and Friday). Although scheduled, they only conduct the meetings as needed, or on an on-call basis. They will usually meet at least once a week. During that time, the IO officer meets with the assistant division commander for support (ADC-S) and provides an update/executive brief on IO activities. The IO officer will also brief the commanding general (CG) once a week during the morning battle update brief (BUB) on IO activities. As a result of the command group's involvement, IO is viewed as very significant by division staff. If the senior leadership of the division is involved, then the rest of the staff will be involved.

U.S. units are no longer deterred from engaging in a Mosque. One U.S. division has begun targeting Imams that preach anti-Coalition rhetoric or are supporting insurgents with safe haven and arms. The CG is the approval authority for going after an Imam. The Iraqi Mosque is a very sensitive area and has many possible second and third order effects if entered improperly. Therefore, the unit must have this operation carefully planned and every contingency covered. U.S. units have developed a method that is working now in Iraq for this procedure.

When a unit goes into a Mosque after a particular Imam and something goes wrong, they have to have an immediate message that can be disseminated to the people. The unit has to give the facts and make them understandable to the public. Units have created battle-drill messages and products for contingency operations. They also produce a fact sheet to hand out to explain what is happening and why it is happening. This sheet will explain why their mosque is being entered, why their Imam is being targeted or arrested, such as he is preaching violence, anti-Coalition rhetoric, or hiding weapons or Former Regime Elements (FREs).

U.S. units take a combat camera (COMCAM) along with them to film the entry. They wear surgical booties to keep Soldiers' boots from being on the floor. Thus far, the Iraqis have been satisfied, if the unit can show why they are there. U.S. units use the Iraqi Civil Defense Corps (ICDC) when practical to assist with the raid, especially to go into areas that are sensitive. The handbill/fact sheet is used to explain their presence. The fact sheet will have statements such as, "On 22 DEC the Imam said to kill Americans," or, "On 22 DEC the Mosque was announcing on the loud speaker to bomb this or attack that." The Iraqi people will understand why the Imam is being taken away. The unit also needs to ensure that during the filming of the raid, areas of the Mosque entered are shown to indicate the condition of the Mosque. The unit turns over the Mosque to the Mosque security personnel. The COMCAM captures all of this, to include telling the security personnel they now have responsibility for the security and condition of the Mosque. If these steps are followed, then nothing will be disturbed in that Mosque and attributed to U.S. Soldiers. Soldiers also make sure the Mosque security personnel know that they have the responsibility of having the Mosque open for prayers in the morning. At 0800 the morning after, U.S. representatives are standing at the Council of Religious Affairs to give notification of the need for a new Imam. Following these procedures avoids an international incident.

It is not called Mosque targeting, it is called Imam targeting. Five Imams have been replaced thus far. Because of the way they do it and the IO campaign that goes with it, it has been very successful. The armed Ba'ath Party is using the Mosques as safe havens for hiding personnel and weapons. The Ba'ath Party has no qualms about using the Mosque as an operations center.

A non-U.S. unit has been able to develop and implement a good IO campaign with limited resources. This division has an artillery major filling the function of IOCOORD. This officer has a deputy (an infantry captain) assigned to him, but neither has been trained in IO. The unit conducts their IOWG in coordination with the higher headquarters issuance of their bi-weekly IO effects fragmentary order (FRAGO). They also conduct "on-call" IOWGs in response to FRAGOs that have specific IO tasks. This timing allows the unit to receive the latest guidance from their higher headquarters and develop their own plan and tasks on how to carry out the guidance. The unit also has a division effects/targeting board that provides more guidance to the IO staff. The targeting board is conducted on a weekly basis. The IO staff takes the guidance from the targeting board and combines it with the guidance from their higher headquarters and molds the two together.

In this non-U.S. division, the major is in charge and focuses primarily on plans and policy. The captain fills the function of operations officer. The IO cell and media operations provide the interface with CPA's media operations. They also have a PSYOP support element (PSE) comprised of a major and two NCOs. However, this is the limit of their PSYOP staffing for the entire division. They are going to expand their PSYOP capabilities in the next few months, with each brigade forming a tactical PSYOP team (TPT). The PSYOP officer is school-trained and has experience in Afghanistan. The division's media cell consists of a major who is in charge, and a staffed press information center. This is more robust than what the U.S. has seen at most divisions, but more limited than what the U.S. has seen at the corps level. Media operations controls the division's one COMCAM team. The COMCAM team has both still and video capability. This is not their primary MOS, however. As has been seen with a lot of the specialized staff elements, they are detailed to fulfill those functions.

The division receives IO guidance from the Joint headquarters, as well as their own division targeting/effects board. The guidance from the Joint headquarters is primarily in the form of a bi-weekly IO effects FRAGO, and occasionally specific effects FRAGOs. The overarching higher HQ guidance is in its overall campaign plan, which has four lines of operation: security, essential services, economy, and governance. For those lines of operation, the Joint headquarters has established eight IO objectives, which the division has refined into their sub-objectives specific to their region. Their overarching goal is to focus on maintaining consent and support of the people.

The division's information campaign is executed by military diplomacy/leadership engagement, PSYOP, posture, presence, profile, and influence of physical effects; it also involves the related activities of media operations and civil military coordination (CIMIC). The division's target audiences are the general population, terrorists and criminal gangs, tribal, religious, and civil/political leaders, internal/regional media, and non-governmental organizations (NGO). The general population is the target audience that they can affect most directly. Terrorists and criminal gangs are affected more indirectly, mainly by marginalizing them through the general population. They use diplomacy and leadership engagement to affect the various leadership figures.

One of their most effective IO activities that is the production of a weekly "good news" document that they distribute to their brigades and the media. The brigades use this document as a basis for their engagements with the local leadership. They usually get this document out a few days prior to the Friday prayers in order to reinforce the positive things the Imams/clerics are saying about the Coalition and to counter the negative things. This helps to shape public perceptions of the Coalition. Another example of activities meant to shape public perceptions is their posture, presence, and profile. As opposed to other units we have seen, the Soldiers here maintain a different force protection profile, such as wearing berets as opposed to helmets and full battle rattle. They also encourage their patrols to interact with the population and provide talking points to them for their engagements with the populace.

For all divisional units visited, a recurring theme is the lack of staffing and trained IO officers. All but one unit has only one officer attempting to synchronize, coordinate and de-conflict the IO campaigns for their division. All IO personnel coming into theater need to be FA-30 trained. The U.S. Army needs to build additional PSYOP, CA and PA training into their program of instruction (POI) for the FA-30 course, or they need to require that all FA-30s attend additional training such as PSYOP, CA and PA courses. The divisional staffs were not properly resourced to conduct IO in this campaign. The officers assigned have only limited knowledge about the core, supporting, and related IO activities. Currently, the FA-30 course heavily emphasizes the MDMP as it applies to IO. **FM 3-13, *Information Operations*** focuses mostly on the MDMP and how the IO officer will interact with the other division/corps staff officers. Neither doctrine, nor the FA-30 curriculum addresses how to actually do the job once in theater, especially when it comes to addressing the other IO disciplines such as PSYOP, CA and PA. IO officers need to know how PSYOP and PA operate. These functional areas to need to be part of the train-up for the unit deploying.

Electronic warfare (EW) assets are limited at the division level, as they are throughout all levels of the Army. One of the new systems that has become available to the divisions is STARGRAZER. Capabilities of this system are classified; therefore, it will not be discussed with any specificity due to the operational restrictions in its applicability. The main point of the observation is that the Army is pretty limited in EW assets. Most assets, such as STARGRAZER, are unknown at the division level. If known, their capability and practicability for specific operations are likely unknown as well.

Lessons Learned

- Successful IOWGs received command emphasis; this typically ensured that the appropriate staff members were present for the meetings. The meeting can be chaired by a member of the command group, or the group can give the CG or ADC weekly update briefs.

- Most officers in general did not understand the concept, role, and relevance of IO. In most cases, it is linked it to PSYOP, civil military operations (CMO) or computer network operations.

- There are not enough trained IO personnel available to cover all operational deployments down to the brigade level.

- The FSOs were given the additional duties as IOCOORD in Phase IV due to the significant decrease in the fire support requirements, but the FSO's priorities shifted back to fire support when the situation dictated.

- IO cannot be conducted properly without the appropriate trained personnel; current MTOE slots at the division level need to be filled prior to deployment.

- Some units and officers mistakenly believe that IO does not apply to combat operations, that it only applies to SO.

- IO does not function well as an additional duty given to another primary staff officer. Most of the officers appear to see IO as a secondary function/additional duty.

- The weekly briefings to the ADC and the CG allow the IO officer to receive senior leader input/guidance to the division IO plan. It also shows that the senior officers in the division have an active interest in and support IO.

- Imams can be targeted and Mosques can be entered while conducting a raid. Proper procedures need to be followed and the populace must have a clear understanding of what is going on and why. All actions taken inside a Mosque must be documented. Use the ICDC where and when practical to conduct the searches of the more sensitive areas of the Mosque.

- DA and CENTCOM did not support one division's request for an IO Field Support Team (FST) prior the initiation of OIF. The divisional units are now being supported by FSTs, but this does not fix the MTOE shortfalls of IO personnel.

- One division combined its IO objectives into one overarching goal: maintaining consent and support of the people. All divisional actions are focused toward that goal.

- The "Good News" handbill is a very effective IO product being utilized by a non-U.S. unit. They produce it weekly, and include positive Coalition stories for distribution to the Iraqi people and media.

- FA30s lack adequate training in several areas: CA, PSYOP, PA, and EW assets and capabilities.

DOTMLPF Implications

Organization/Materiel: Add IO personnel and equipment to applicable unit organizations/MTOEs in order to enable planning and execution of IO at all levels.

Doctrine: Incorporate the fundamental understanding of IO into all Army doctrine so that the concept, role, and relevance of IO can be understood.

Personnel: Invest in rigorous training and education for IO/FA-30 personnel, to include understanding the fundamental functions of all the IO elements/ participants.

Leadership and Education: Incorporate the concept of IO integration into the Army's education systems; the concept that "not everything has to be killed or destroyed in order to execute a successful mission" is necessary for successful operations across the ROMO.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
EW Assets Available to Division	10000-12020
Command Emphasis on IO	10000-03456
Division IOWG	10000-02822
Division PSYOP Support	10000-46099
Division IOWG and Targeting Boards	10000-62208
Division IO Focus	10000-05808
Senior Officer Education	10002-04160
IO Training	10000-29184
Staffing	10001-16788

Chapter 1: Information Operations
Topic F: IO at the Brigade and Below

One brigade combat team (BCT) north of Baghdad conducts a weekly Information Operations Working Group (IOWG) or what they call the IO/CA targeting group. The IO/CA targeting group consists of the FSO, PSYOP, PAO, CA, COMCAM, S2, and S3. The FSO has the additional duty of IOCOORD and chairs the group. They go over the Intel summary and any needs for existing operations. The BCT started a weekly IO/CA targeting group after transitioning to a stability operations and support operations (SASO) environment, but no longer do it due to shift in operational tempo (OPTEMPO). The focused shifted to IO only after they shifted to the SASO effort. In addition, the IOCOORD was the FSO during the initial combat phase of operations. His focus during combat operations was primarily on delivering lethal fires for the brigade commander. No one was working IO for the brigade during this phase.

Operations tend to dictate that planning is more short-term, and operations tend to be dictated by available intelligence. A human intelligence (HUMINT) source will give the BCT a target. If determined to be a legitimate target, then 24 to 48 hours later the BCT will go after that target. So, they quickly change whatever they are doing and shift to that mission. That is the battle rhythm they have. As a result, the IO/CA targeting group focuses mainly on short-term planning and reactionary planning on targets of opportunity. There is not any doctrinal guidance on conduct of an IOWG. **FM 3-13, *Information Operations***, does not give any information on the subject of an IOWG. The manual mostly focuses on planning and execution at the corps level and above. This is a good TTP on the planning, targeting, and conduct of a maneuver brigade IO cell.

The brigades are not staffed with IO personnel, and have limited IO assets, with the core capability of PSYOP (five TPTs) and related elements of CA and PA. They are also not authorized a PAO, but most commanders have designated one. IO in the division is mainly decentralized. The guidance they receive from division is the weekly talking points. This has been a common thread with all the BCTs. They use these as general guidance in developing their own talking points specific to their AOR, as well as their engagement plan. The talking points are used at all levels of command, from brigade to company, in their engagements with tribal and local leaders and Imams. The CA teams use them as well. Again, the most effective means of getting the message out seems to be with face-to-face and word of mouth. Leaders have found that sometimes they are at an advantage when engaging some of the local leaders, such as the tribal sheiks. The sheiks want to maintain their power base, so often they cooperate with the Coalition, although sometimes grudgingly. Some brigades also have newspapers that they use for IO purposes. Most of the papers are funded through the CERP, but the brigade tries to keep it balanced because they do not want it to have too heavy a Coalition flavor (creditability).

When the brigades began conducting CMO in conjunction with peace enforcement operations, there were virtually no newspapers or radio stations operating within their AORs. In some areas, the brigades lack the resources to win the IO fight. There are limited newspapers in their AO. The ones that exist were established or reinforced by the units on the ground and their distribution is also limited. There is no radio available in most areas. In those areas, the only means of delivering PSYOP and command messages is through face-to-face meetings, PSYOP leaflets, and minimal newspaper coverage. The television capability in these areas is from Al Jazeera and Al Arabia. These stations provide only negative content with regards to U.S. presence in Iraq. This is the best medium for distributing messages in the area, just as it is in the United States, but is only available in limited areas. During the previous regime, satellite TV

was prohibited amongst the local populace. Now that they are liberated, nearly every household has a TV and satellite dish. This provides the Former Regime Loyalists (FRL) with a great method for delivering negative information messages to the public. The best deception is reinforcement of an already preconceived perception. An overwhelming number of Iraqis/Arabs believe that the U.S. is there to steal oil and Iraq's resources and has no intention of leaving. Since this is the mind set of the average Arab, this is what the media presents in TV coverage. The media selectively pursues only stories that support this angle. You will not find local media portraying stories of Coalition forces re-building schools, hospitals, or other infrastructure improvements. These stories do not reinforce the understood perception. Without the capability to present information in this medium, it is very difficult to counter their campaign messages. Units have had to aggressively pursue the use of leaflets to counter FRLs information. However, this cannot match the distribution of TV.

One brigade does have a radio and TV station in its sector. The commander has taken a proactive approach in getting his message out. The brigade has their own Iraqi version of "CSPAN" and the commander holds government council meetings where they talk about all the positive things that are being done for the local populace. The staff persuades the local media to participate. They have procured funding to purchase TV cameras and equipment, which they use to record the events. This empowers the locals to hold their government officials responsible for their civic duties. In addition, the unit is very cautious about what and how much information is presented over this medium. The less involvement the Coalition has with it, the more credible it becomes as an information source. Otherwise, it would be viewed simply as another Coalition propaganda vehicle.

There is no doctrinal requirement for a PAO or S1 to conduct media analysis, but it is being done in a couple of different brigades. One PAO maintained every news piece that was written about his unit, a useful tool for dealing with future visits from organizations that report either positively or negatively. For example, on the positive side, the unit may want to maintain a relationship with the media and leverage them when they need to get a story out. There was an example in one particular unit in which the reporter really embraced the unit which led to future benefits. On the negative side, they can see who the unfriendly or hostile organizations are, or the ones that tend to report false information. That gives the unit an advantage in developing courses of action (COAs) for dealing with them in the future. For example, they can simply deny them access to embed or be prepared to debunk any false information they put out.

One armor battalion uses its S-3 (Air) to coordinate its IO plan. Some others use the FSO or S2 to coordinate IO. One battalion assesses targets and determines effects desired through the commander's intent, specified tasks from the military decision-making process (MDMP), and specified tasks from brigade. Products are crafted to achieve the effects and desired end state. Products may include, but are not limited to, flyers, posters, messages published in newspapers, messages broadcast on the radio, and messages broadcast on the television. One battalion found measuring the effectiveness of products extremely difficult. The only intelligence gathering tools available are the companies operating in their assigned AOs. Their brigade hosts a weekly IO meeting to pass information to subordinate units. Recently, this meeting has been cancelled due to Relief in Place (RIP) and re-deployment preparation. The battalion does not conduct IO meetings because there is only one IO representative (the S-3 [Air] in this case).

The availability of intelligence and fluid nature of kinetic operations in a low intensity conflict produce a situation in which most IO planning at the battalion level is focused on near term events. IO is planned based off specified tasks from brigade and the battalion and brigade commander's intents. The fluid situation in Iraq does not allow a battalion to conduct long-term IO planning. Most IO messages are planned, developed, and distributed within one week. The only long term planning the unit can accomplish is for events that are scheduled and cannot be adjusted, such as Ramadan. The overwatch for the IO campaign at battalion level is usually the executive officer or the operations officer, and ultimately the battalion commander.

Junior officers need a more rounded and unconventional education in order to prepare for stability operations. Some maneuver battalions pointed out that a key lesson learned was the use of officers in non-conventional roles. One battalion is using its FSO to do IO and S5. They know that the FSO understands D3A (decide, detect, deliver, assess) and effects-based targeting, but the FSO has to be able to do many things other than targeting. These officers who are schooled in their basic branches come here and have to conduct on-the-job training (OJT) for most of these tasks. They are doing IO, project management, construction engineering, IO interface, etc. (all of the things that you learn as you get higher in rank). For example, at brigade you have an S5 to deal with these things. This young group of officers has assisted in the recruiting and training of the Iraqi Fixed Protection Service (FPS). They have also overseen and managed the FPS. They have supervised the construction of critical infrastructure needs such as sewage, water, trash removal, and electricity. They worked with NGO and IOs to get resources and take care of these projects when CERP money is not available or has dried up. They have worked with Neighborhood Advisory Councils (NACs) and District Advisory Councils (DACs) to prioritize projects and CERP allocations. They have worked on the bid process to ensure there is some kind of equity and transparency in a society that does not understand this process. The Iraqis have always conducted these things by family or political connections or bribes. The officers have helped and assisted in neighborhoods to establish democratic councils where there has never been anything like it in the past.

One battalion in Baghdad has observed significant problems with expectation management. Two key problem areas were with CERP funds and Relief in Place (RIP). In the first area, the battalion had spent considerable time building trust and faith with the local interim government. This had been constructed with many face-to-face meetings and prioritization of projects to be completed. Much of this "good faith" was destroyed when the CERP funds were no longer available to the battalion commander. Some of this trust is now being restored, but only through significant effort by the command and the availability of funding. In the second area, the locals have demonstrated anxiety of the impending RIP. They fear that the incoming command will not be as understanding of their situation and may have other priorities. Plus, in their society, most things are accomplished through relationships, trust and "good faith." They fear the loss of these relationships. Therefore, the current command has attempted to build "quick wins" for the incoming command. They have purposely delayed the completion of several projects. As part of their IO campaign, they place banners on all infrastructure projects to highlight the construction that took place courtesy of the NAC and the unit itself. So, by delaying the completion of several of these projects, they will be allowing the incoming command to place their name on these grand openings. As result, the unit will build credibility with the NAC and "good faith" with the locals in that neighborhood. The unit will not have to wait weeks into its rotation to have success and build trust with the people in its AOR.

There are no authorized slots in a maneuver brigade or battalion for information officers. Therefore, commanders assigned other staff officers to function as their elements IO officer. In most cases it was the fire support officer, because this officer's role was greatly diminished in the stability operations and support operations role. He was also the likely choice because of his understanding of the targeting process. However, most of the targeting at the battalion and brigade level is directed at Former Regime Entities and not at traditional influence type targeting found in the Balkans scenarios.

In all situations, the FSOs were not trained in IO before deployment. They learned as they went along. They were not planning for IO or preparing for IO until major combat operations were declared complete. All officers are subject to assignment as IO officers in battalion and brigade assignments as an additional duty. IO needs to be incorporated into the POI for all officer education system (OES) courses, such as the officer basic course (OBC), captain's career course (CCC), and intermediate level education (ILE). This provides all officers with a broader base of knowledge about IO to utilize when called upon to perform IO as an additional duty.

Lessons Learned

- Officers assigned the additional duty of IO officer were not be able to effectively execute those duties during combat operations because they were primarily focused on their designated specialty.

- One brigade's IO/CA targeting group focuses on short-term planning due to the fluid and reactionary IOE. This provides them with the flexibility to react to available intelligence and current operations.

- Most commanders in Iraq have designated an officer as the PAO; most have had little or no PA training or education.

- The satellite television stations in the region provide mostly negative information regarding the Coalition's efforts in Iraq. Commanders are using local newspapers to counter this information. In places where they did not exist, they have assisted Iraqis in establishing, writing, and distributing newspapers.

- The local populace has developed considerable trust and a bond with OIF I units. The local populace is significantly concerned about the current transition of forces and the impact it will have on the relationships that have been built with our departing forces.

- The Coalition has limited television capability, mostly in the Baghdad region. This makes it very difficult to counter adversary campaign messages.

- Junior officers are not prepared to operate in unconventional roles outside their branch specialty.

- The OES does not appear to have adequately incorporated civil affairs, media relations, public relations and information operations into its POI.

- Although not resourced with IO personnel, some brigade staffs were still able to effectively conduct IO and synchronize with the higher and lower echelons.

- Units appointed someone on their staff an additional duty appointment as the IO officer.

- An effective IO campaign estimate should include a complete assessment of the entire country's ability to provide media information in order to be prepared to counter negative news stories and adversary propaganda.

- Use of a senior member of the staff to supervise the IO campaign is critical to the legitimacy and success of the process.

- Junior officers are helping establish democratic councils, equity in contract bidding, and project management in their neighborhoods. Some of these concepts are completely alien

to a culture which has traditionally accomplished these things through family, tribal, or political connections and bribes.

- One battalion is assisting his relieving unit by developing "quick wins," which help with trust amongst the locals during the transition. Completion of certain infrastructure projects will be purposefully delayed in order for the incoming unit to claim responsibility.

DOTMLPF Implications

Organization/Materiel: Add IO personnel and equipment to applicable unit organizations/MTOEs in order to plan and execute IO at all levels.

Doctrine: Incorporate the concept of "transitional trust" into the IO planning process for TOAs and RIPs. Include the concept of "quick wins" and other successful TTPs.

Doctrine/Materiel/Organization/Training: Incorporate the concept of a comprehensive media analysis, of the local/host country, into the IO planning process; proper analysis will help the Coalition/U.S. prepare to counter negative news stories and adversary propaganda. It will also identify national, regional, and local media shortcomings so that the Coalition/U.S. can project resources to execute effective IO. Incorporate this into training scenarios and events.

Doctrine: Incorporate the concept of tactical unit commanders and leaders as facilitators of democratic concepts and processes into cultures where these concepts do not exist.

Leadership and Education: Incorporate the concept of IO integration into the Army's education systems.

Materiel: Develop and resource units with capability to provide immediate IO overmatch (television, radio, and other appropriate media) in accordance with the commander's IO intent.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Brigade Media Analysis	10000-09139
Brigade IO	10000-34560
Brigade IOWG	10000-18576
Customizing Messages	10000-11109
Shortfalls in IO	10000-53147
Battalion IO	10000-81780

IO Planning	10000-33389
IOWG	10000-11449
IO Themes and Messages	10000-04224
Junior Officer Education	10000-71995
Staffing2	10000-72556
Linguist3	10000-52668
IPB Process	10001-05468

Chapter 2
Civil Military Operations - Civil Affairs

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Summary

Coalition forces in Iraq are engaged in the military occupation of a predominately Arab Muslim state with extremely diverse political and socioeconomic divisions. Maneuver commanders are responsible for the law and order and administration of their assigned areas. Civil-military operations (CMO) is a critical element to both the establishment of a safe and secure environment and to the country's transition to a self-sustaining civil administration.

Implicit in this endeavor is a coordinated effort on the part of the Coalition, simultaneous to the continuous empowerment of and transition to local and national Iraqi governance. Civil affairs (CA) forces work for maneuver commanders and provide technical guidance and expertise. A defined command/support relationship, coupled with a clear understanding of that relationship, is an essential step for optimal integration with the maneuver unit. Specifically, the integration of CA with the S5/G5 staffs is crucial.

Task forces encountered several challenges in conducting CMO. Multiple CA brigade headquarters were deployed. Their integration posed unique challenges for the Coalition. CA augmentation to the Coalition Provisional Authority (CPA) posed unique challenges as well. The Iraqi Operational Environment (IOE) required certain force protection measures to which CA units were not accustomed or task organized. Coalition forces had to adapt in order to conduct CMO in this environment.

In the IOE, success in civil administration requires an understanding of Iraqi religious and tribal institutions and their relationship with the secular forms of government inherent to democracy and proposed by the CPA. U.S. plans and practices cannot be successful in the absence of a knowledge and understanding of Iraqi sentiments and perceptions. This is all the more important given the high turnover of CPA personnel and the lack of regional expertise held by the majority of Coalition military and civilians in Iraq. Although nominally running Iraq, maneuver commanders are generally not trained in the complexities and subtleties of the area. This has resulted in some U.S. practices serving to alienate common Iraqis who initially supported the Coalition. To partially rectify this, some OIF units have sent division and brigade commanders and staff to Jordan to receive instruction on how to operate effectively in Arab/Muslim Iraq.

The security situation in parts of Iraq dictates modification of equipment and the development of tactics, techniques, and procedures (TTP) in order to maximize success. Integration with supported units requires communications equipment, while CA teams require crew-served weapons and additional armored protection on their vehicles.

Chapter 2: Civil Military Operations - Civil Affairs
Topic A: Integration of the Task Force CMO Effort

Observation Synopsis

The common perception throughout the theater is that a roadmap for the rebuilding of Iraq does not exist. There is not a plan that outlines priorities with short, medium, and long-term objectives. If such a national plan exists with the CPA, it has not been communicated adequately to Coalition forces. Task force staffs at all levels of command have reiterated that there is no clear guidance coming from Baghdad.

The inability to develop or articulate a plan contributes to a lack of unity of effort between the Coalition and CPA. For the Soldier on the ground conducting CMO, the lack of higher guidance is believed to be an outcome of a lack of understanding of one another and a feeling of mutual unmet expectations between the two entities.

Coalition commanders and staff view the CPA as understaffed, sluggish, hesitant to make a decision, and often detached from the true situation on the ground. With CPA officials on 90-day rotations, much time is required for replacements to become knowledgeable with the specific issues and players they are facing. Nine months after the declared end to major military action, CPA staffs in the center portions of the country are estimated at 20% strength. Whether rooted in the lack of staffing or to security concerns, there appears to be an inability of CPA Headquarters (Baghdad) to get the needed "eyes on" what is happening. Subsequently, CPA directives appear to be out of synch with the current situation. In contrast, CPA views the military as unwilling to yield, impatient, and not willing to accept that diplomacy takes time.

The apparent lack of a unified rebuilding plan is as much a result of the military planning priorities as the lack of CPA direction. In preparation to deploy, maneuver units admittedly did not focus on CMO. The focus was on the war fight as opposed to Phase IV-type operations.

The major outcome of the lack of a Coalition plan is that each brigade combat team (BCT) outside of Baghdad is conducting its own CMO campaign. Many brigades and battalions did not develop CMO Annexes. Although CA units are credited with gravitating to what they believe needed to be done, the CMO effort could have been more effective: units conducted multiple, duplicative assessments and Commander's Emergency Response Program (CERP) monies were spent with no clear vision on how the projects would tie in to the CMO end state. Despite not knowing the Coalition's vision of the end state, BCT S5 organized the brigade-wide CMO effort through weekly meetings with battalion task force S5 and key members of the brigade staffs. This provided a forum for horizontal integration among the battalion task forces.

Another factor affecting integration was that command and support relationships between CA units and the task force were vague and inefficient. Both CA unit commanders and maneuver task force commanders state that the command relationship between CA elements and the supported units was unclear.

FM 41-10, *Civil Affairs Operations*, states, "Because CA units are neither organized nor equipped to provide unilateral C2 [command and control] of attached units, they are normally attached to higher commands." CA units were not attached to units below the division level. Many CA detachments and teams were either operational control (OPCON) to BCTs or remained attached to the division and placed in general support of a BCT. One CA battalion remained task organized to its CA brigade. Its detachments were in direct support of two separate BCTs. That CA brigade remained task organized to its CA command (CACOM). In this arrangement, the CACOM and CA brigade had to exercise C2 over subordinate units to

include the issuance of orders. Many CA commanders and CA team leaders consider the CA brigade as not staffed, equipped, or trained to provide operational C2.

Maneuver unit commanders uniformly stated that they preferred to have the CA units, down to the smallest team element, attached to them to ensure unity of effort. Maneuver unit commanders believed that CA support at both the brigade and battalion level did not provide them effective control and influence of CMO. Only by being in the rating scheme does a maneuver commander consider his CA elements as responsive to his plan. Attachment provides the basis to build a habitual relationship. It also provides a greater sense of constancy that the commander has that combat multiplier when needed. For their part, through living and working with the supported unit, a CA element can better integrate as part of the task force. The BCT commanders also desired that each battalion task force commander who controls battlespace be provided his own dedicated CA Team. This did not occur.

Most CA battalion commanders preferred that their detachments and teams not be attached to maneuver units. These commanders stated that such an arrangement would remove their role in shaping CMO and subsequently they would serve little purpose. Likewise, CA detachment and CA company commanders' roles would be degraded if their subordinates were attached out to maneuver units.

CA teams struggled with the question of "For whom do I work?" while maneuver commanders struggled with the question of "For whom do they work?" The CA command/support relationship selected needs to be mission, enemy, terrain, troops, time, civilian (METT-TC) dependent. It needs to be an outcome of a true analysis. The supported unit commander, the CA commander, and CA team chiefs need to clearly outline the roles, responsibilities, and expectations of all parties.

The question of "who works for whom?" has significance for staffing of units as well as functional area support. In Phase IV operations, BCTs have a major role to play in CMO, but, within the BCT, task force S5 staffs were often understaffed for the CMO effort. These staffs had to be augmented by the supporting CA unit, disrupting the CA force's task organization.

The typical maneuver division MTOE for the G5 section authorizes 1 x LTC(05) and 2 x SPC(E4). Combat brigades and battalions are not authorized an S5. At division level, a 3-Soldier G5 staff is wholly inadequate to execute the required staff functions as the CMO cell as described in **FM 100-5, *Staff Organization and Functions***. Likewise, the need for brigade and battalion S5 officers and staff in the IOE is imperative. Some divisions and brigades obtained G5 and S5 personnel from the individual ready reserve. These augmentees' CA experience and knowledge varied. Some were not graduates of the CA course. Some had not been actively involved in CA activities in over eight years. For brigades that did not acquire an S5 prior to deployment, an available officer was designated the S5. Oftentimes the fire support officer assumed this additional duty. Despite no previous CA or CMO experience or training, some of these S5s adapted quickly to their new role.

As a result, maneuver divisions and brigades relied on the supporting CA units to augment their staffs. Specifically at the division level, a CMO planner proved essential. Without an S5 in peacetime, the brigades and battalions were mistakenly comfortable with not incorporating S5 input into the MDMP. However, CA battalions are not structured to provide staff augmentation cells. They had to pull individuals from teams, strip commanders from detachments, or reassign teams outright to provide the needed staff augmentation to the G5 and S5 staffs. All of these actions diverted assets that were needed in the field. The dual assignment of a CA detachment commander as the brigade S5 severely limited that individual's ability to circulate amongst his teams as he was often inundated with staff requirements. G5/S5 staff augmentation needs to be built into the battle roster for deployment if not built outright into the MTOE.

Regardless of the how the G5/S5 billet is filled, G5/S5 derive prestige and effectiveness based on their perceived connections to channels of command. Commanders should publicly praise their liaison staff with the host nation. Failure to do so will decrease overall effectiveness. Commanders should generally have their liaison personnel accompany them on all meetings with local nationals.

The role of the CA brigade headquarters was undefined and subsequently the headquarters was not effectively used. The CA brigade headquarters is doctrinally attached to units that are corps level and above. In anticipation of a humanitarian crisis resulting from ground combat operations, four CA brigades were mobilized and deployed even though only one corps headquarters was deployed.

No humanitarian crisis occurred and the CA brigade headquarters subsequently did not have a readily apparent mission. One CA brigade headquarters staffed and ran the Humanitarian Operations Center (HOC) in Kuwait and also provided a 26-Soldier operational planning team (OPT) to a division. Another operated the Humanitarian Assistance Coordination Center (HACC) in Baghdad and provided C2 responsibility over subordinate CA battalions and separate CA companies. However, due to its location inside the secured Green Zone, the HACC-Baghdad had limited local populace interaction. One CA brigade provided support to the corps support command (COSCOM). A fourth brigade was divided to support the HACC-Jordan, to support an area support group in Kuwait, and to support the Marine Force operating in Iraq. These CA brigade headquarters also filled billets in or directly supported by CPA.

Each of the CA brigades deployed with their staff sections. Outside of the one CA brigade providing C2, the staff elements (G1-G4) had no function. The one CA brigade affecting C2 had to do with only a 3-Soldier S3 cell. Additionally, the CA brigade was not outfitted with the necessary organic field communication equipment to communicate with subordinate units. Hampering the CA brigades even further was the fact that they did not have much in terms of organic mobility assets.

There were expectations of the CA brigades by the CA battalions that were unfulfilled. One unmet expectation was to capitalize on the CA brigades' functional specialists. There was minimal vertical integration of the functional specialties. In many cases, the endeavors of the CA brigade (e.g., conducting assessments) duplicated those of the CA battalion that was functioning in the same area. The CA battalions looked to the CA brigade to synchronize the CMO effort, which did not occur.

CA direct support detachments opined that the CMO effort would have benefited from more direct support teams as opposed to staffing the CA brigades. There were units (e.g. field artillery and engineers) controlling battlespace who could have greatly benefited from dedicated CA teams that were not available to them.

The CA command and brigades became a force provider to CPA and thereby reduced their unit effectiveness. The CPA actively sought staffing assistance due to its lack of personnel. Individuals from one CA brigade and CACOM filled critical positions. Although these CA personnel, both individually and collectively, made significant contributions to the overall national effort, their absence degraded the efforts of the teams from which they were drawn. These individuals were perceived as indispensable by CPA and, subsequently, efforts by the CA brigade and CACOM to reintegrate them into their original teams were met by resistance from CPA. In many cases, the rating scheme for these individuals fell within CPA channels. As a result, commanders were challenged to direct their own assigned personnel.

CA forces require support from maneuver units due to force protection requirements. The requirement level is dependent upon the division task force. One division task force's

requirement for a convoy to leave the forward operating base (FOB) was a minimum of three vehicles, a minimum of three service members (SM) per vehicle, and two crew-served weapons. Most BCTs in this division granted an exception by allowing CA teams to depart with two vehicles for convoys within 10 km of the gate, during daylight hours only. A captain may approve a daylight movement, but a battalion commander must approve any night movement.

Many CA battalions operated under the MTOE of a six-Soldier direct support team (DST) with two high mobility multi-purpose wheeled vehicles (HMMWVs). One COA for DST to meet the force protection requirements was to combine teams, or at least provide each other half a team to meet the 9-Soldier, 3-vehicle rule. Another COA was to coordinate with a fellow "slice" element. Other non-organic units faced the same force protection challenge, thereby creating conditions for mutual support arrangements. A third COA was to request additional vehicular and personnel support from the supported maneuver unit.

The first two COAs required the establishment of informal relationships and a fair amount of bargaining. Due to the quid-pro-quo aspect of these COAs, a negative result was that CA teams did not depart the FOB on missions as often as they desired. The third COA, optimal for the CA team, was viewed negatively by some maneuver task forces. Some supported commanders did not favor having to provide support to a supporting unit. Other commanders, however, made CA force protection augmentation a top priority. These CA teams were better able to optimize their time and efforts.

An initial drawback to all CA forces in theater was the lack of crew-served weapons. In addition to personnel and vehicles, most CA elements had to rely on the maneuver unit to provide the crew-served weapons since the typical CA battalion possesses only four M249 Squad Automatic Weapons (SAWs). A plus-up of M249s to the CA forces in theater was provided later in their deployment.

Lessons Learned

- CMO suffered from the lack of clear task and purposes nested in CMO annexes from the national level to the battalion task force.

- Command and support relationships need to be clearly defined at the onset of an operation and refined continuously. The CA command relationship selected needs to be METT-TC dependent.

- CA units and supported units need to address G5/S5 staff augmentation prior to deployment to minimize task organization disruption. A venue for clearly outlining the supported command's expectations is through the mission letter. An alternative recommendation is to staff division G5 sections with their "go-to-war" complement.

- The CMO situation on the ground could have greatly profited from an increase in general purpose CA teams as opposed to CA brigade headquarters.

- CA brigades and CA commands providing personnel support to U.S. government agencies should ensure that the task force and these agencies clearly understand the scope of the attachment and the conditions for the reintegration of these personnel with their assigned units.

- Task force commanders who provided support to their CA teams enabled these teams to be more active within the area of operations (AO).

DOTMLPF Implications

Doctrine: Change the doctrinal field manuals to reflect that a CA battalion will provide a CA planner and augmentation to the G5 to support division (or equivalent) operations.

Organization: Division G5 section MTOE should increase their authorized and required strengths.

Organization: CA brigade MTOE should be modified to reflect an increase in the number of vehicles.

Organization: To support the G3 planner requirement, add to the CA battalion MTOE two positions to the battalion S3 section: One major and one captain with the title "Planning Team."

Organization: To support the G5 augmentation requirement, add to the CA battalion MTOE a G5 augmentation team to the functional specialty company.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
No CMO Annexes developed	10000-03200
CPA - Military expectations	10001-01732
Describe coordination with the Coalition Provisional Authority	10002-03688
CPA direction slowed civil administration progress	10000-03026
CA command and support relationships	10000-43776
CDRs expectations for incoming CA forces	10000-13536
The doctrinal template of CA forces need to be revised based on METT-TC	10000-49086
Division G5 Section not fully staffed	10001-54627
S5s serving also as commander	10000-46552
Staff Augmentation to brigade Staff	10000-41328

CA brigades need to modify its current organization	10000-42682
Need for more CA Companies and Teams	10001-12837
CA brigade rank structure	10000-01824
CA as a force provider to CPA	10000-13682
CA Team Organization	10000-21427
Effects Coordination Cell (ECC)	10000-31620

Chapter 2: Civil Military Operations - Civil Affairs
Topic B: Transitioning to Civil Administration

Observation Synopsis

In the IOE, CMO success is largely contingent on the brigade commander's (BDE CDR's) focus, which varies by brigade. While one brigade commander stated explicitly that he was not in Iraq to win "hearts and minds" but rather had a combat mission to destroy "the enemy," other brigade commanders stressed that gaining the emotional and intellectual acceptance of the Iraqi people was the only way that American forces could be successful in Iraq. Within the theater, American operations differ from British operations in that the British integrate CMO with all operations and include a responsive and proactive IO program. In short, CMO is not always given command emphasis in U.S. operations. Lack of emphasis may come in the form of not providing security/escort vehicles to allow DST to function under force protection requirements.

The administration and reconstruction of a country the size of Iraq exceeds the capabilities of U.S. CA forces and the Coalition Provisional Authority (CPA). As a result, it is necessary for major subordinate command (MSC) assets to engage in administering the country. Consequently, it is necessary to leverage assets from division and brigade, such as medical, engineering, and law enforcement. This involves functional specialists within the division linking up with their corresponding Iraqi counterpart. For instance, division medical personnel help to rejuvenate the local hospitals and departments of health, engineers assist in public works, and the provost marshal office (PMO) assists with police forces. However, these specialists and many S5 have never received any training or introduction to CMO. Orientation to CMO is not emphasized in officer basic or advanced courses. In light of the ongoing requirements in Iraq, a greater orientation in CMO to all officers would be helpful. This could occur in the captain's career course.

Furthermore, knowledge of contracting and scope of work (SOW) is critical for all CA forces. CMO activities are heavily reliant on the timely, targeted, and efficient application of funds, particularly CERP funds. Training in contracting, negotiations, and SOW would add significantly to the success of U.S. forces in CMO environments.

A structure to manage civil reconstruction projects within any size task force is necessary to ensure a unity of effort and optimal impact on the overall CMO plan. Given the importance of CMO in stability and support operations (SASO), division and brigade commanders have developed tactics, techniques, and procedures (TTP) to direct the focus of their staffs to address CMO. One such TTP is to use non-lethal effects matrices in the form of an effects coordination cell (ECC) to track individual projects and available funding. Both at the division and brigade levels, the ECC is headed by the fire support officer (FSO), due to the existing staff of the fire support section coupled with the fact that indirect fires are not being heavily utilized currently in Iraq. This additionally capitalizes on the established relations between division and brigade FSOs. Added to this is the fact that most of the battalion S5 are also the battalion FSO. This basically shifts the focus of the artillery structure in the division to accommodate projects and contracts. Once a week, one division ECC conducted a video teleconference with the division commander and all brigade commanders. Also involved are all primary and special staff officers (for instance, the division surgeon briefs on ministry of health issues, the judge adjutant general (JAG) briefs on ministry of justice, the provost marshal (PM) on ministry of the interior, the division engineer (DIVENG) on public works, etc). Inherent in the success of the ECC is timely and accurate "bottom up" information from each sector. This involves the garnering of public sentiment by forces interacting with Iraqis on a daily basis. The ECC allows for an organized, targeted, equitable distribution of CERP funding in the division AO.

Furthermore, it is important to overlay military sectors upon existing geopolitical boundaries in Iraq. Iraq is divided into eighteen provinces and Coalition forces have established military boundaries throughout the country. In some cases, the military boundaries do not correspond with the geopolitical boundaries. This results in the Iraqi governor having to deal with more than one military chain of command, as well as military chains of command having to deal with multiple Iraqi governance and administrative structures. It also necessitates military forces establishing habitual relationships with more than one CPA regional office, since the CPA has aligned itself with existing Iraqi geopolitical divisions. The effects are similar at the battalion level, where town and county leaders are forced to deal with more than one battalion commander. In areas where Coalition forces have aligned their division, brigade, and battalion boundaries with Iraqi geopolitical divisions, there is a greater unity of effort and consistency in dealing with Iraqi governments.

The collapse of the Baath Party and subsequent debaathification efforts resulted in an absence of local Iraqi governing authorities. As a result, U.S. forces appointed governance officials as well as neighborhood, town, and district councils. In the case of Baghdad, this was done largely in concert with the CPA. Outside of Baghdad, this was done by the MSC without guidance from the CPA. The creation of local governments needs to be standardized. Local governance structures are not bounded entities. Rather, they are components of larger governing structures. Expertise must be leveraged and diffused to the lower tactical levels. This expertise includes CA, legal, financial, and interagency.

In order to leverage expertise and create consistency in Diyala and Salahdin Provinces, the MSC created a mobile training team to advise on TTP for creating town, district, and provincial governing bodies throughout the province. This had the result of providing a division unity of effort and creating compatible structures that could interact with each other. This is significant in that the MSC has two provinces in its AOR and that each of the provinces coordinates both with other provinces and with the central government in Baghdad. This is further significant in that the expertise needed to establish local governments is not doctrinally present at the maneuver battalion or brigade level. Under the present environment, that expertise does exist to some degree at the division level by virtue of their association with the CPA and the presence of a CA governance section at the CA brigade level. Failure to incorporate expertise and standardization at this level would result in a variety of different government structures that would eventually have to be modified in order to be in accordance with the national governance plan. This also serves as a mechanism for timely funding of government structures.

Unemployment and security are currently the biggest concerns of Iraqis. Projects are extremely helpful, but should include provisions for the employment of Iraqis. Unemployment, in turn, creates resentment and fertile ground for the recruitment of anti-Coalition elements. There is significant discussion in the MSC concerning the relationship between projects and the creation of a secure environment. In this vein, there are attempts to correlate improvements in the security situation with the amount of money spent in construction/reconstruction projects. Due to the virtually unlimited number of variables inherent to the situation in Iraq, the establishment of a positive correlation within acceptable margins of error is virtually impossible. Nonetheless, the restoration of a nation's economy is a vital element in securing political stability and needs to be the center of constant attention.

Lessons Learned

- Division and brigade staffs can shift their focus to CMO and SASO. FSOs have existing coordination structures that are conducive to examining non-lethal battle effects.

- Ensure that military sectors correspond with civil geopolitical boundaries.
- Unemployment is a key concern and potentially linked to the security situation.
- There needs to be a uniform process for establishing local governments.

DOTMLPF Implications

Training: Training in contract management and funding sources should be stressed in the CA course.

Leader Development: An orientation in CA and CMO should be provided in the captain's career course.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
CA Operators and S5s Require Training in Project Management	10000-08640
Recognition of Geopolitical Boundaries	10000-16880
Collateral Damage	10001-29730
Area Knowledge and Language Capability is Critical in Iraq	10000-83709
Selection Support Team for Provincial Governments	10000-70200
Surveys of Iraqi Populace	10000-67032
Contracts	10000-20790
Staffing of Contracts	10000-67221

Chapter 2: Civil Military Operations - Civil Affairs
Topic C: Cultural Issues in Iraq

Observation Synopsis

Interviews indicate an area needing improvement is institutional preparation in language, as well as political, ideological, and cultural training. Cultural awareness in the IOE goes beyond the simplistic "do not use the left hand" or "show the feet" that is characteristic of U.S. briefings and preparation for operations in the Middle East. Rather, "cultural awareness" is a component of the politics, religion, values, history, society, and economics of a particular region. In other words, culture transcends all aspects of a society and cannot be delineated into a separate simplistic category unto itself. In the Middle East, Arab "values" are amalgamated into Islam, which in turn is an evolving system that reproduces itself. Socio-political establishments such as tribes are a historical fact that in turn embody economic and religious imperatives and interact with local and national governments. Cultural awareness thus needs to address different forms of religion, political structures, and modes of production and their influence on a given region. A failure to understand the role of tribalism, for instance, has led to some American units disproportionately empowering tribal structures, while others have virtually ignored them. In Iraq, religion and politics cannot be separated. Consequently, an academic understanding of Islam is less relevant than an understanding of the unique versions of Islam that exist in the different areas of Iraq and the role that each plays. Training for U.S. forces in Iraq thus needs to focus less on Arab culture and more on the specificity of Iraq.

Operations in Iraq require understanding of tribal and religious structures. These are often in competition with other governing and administrative structures such as town councils and local police. In a single town, there can be multiple forms of authority, to include religious leaders, tribal leaders, elected councils, prominent and educated citizens, as well as former and newly appointed leaders. These sources of authority may be complementary or in competition, so it is important to deal with appropriate leaders. Tribal leaders, for instance, have limited authority within certain parameters, such as settling minor disputes between their own tribal structures. In other matters and places, tribal leaders have limited or no authority. A failure to recognize the different sources of authority can disrupt existing governance and resolution structures. In this light, consistent guidelines that promote understanding should be forthcoming from the CPA and the U.S. Army.

The use of translators is an area meriting improvement. Due to a lack of trained military Arabic-speaking linguists and contracted third country translators, U.S. forces are reliant on locally hired translators. This has the potential to cause problems due to the disproportionate influence and bias that translators tend to wield. This can result in some groups being favored at the expense of others, while the subsequent animosity towards the translator may be directed at American forces. In an extreme example of this, American forces that entered Iraq with Kuwaiti translators encountered a negative Iraqi response stemming from animosity between Iraqis and Kuwaitis. Similarly, tribal and sectarian affiliations of locally hired translators may interfere with U.S. objectives and operations. In short, the lesson is to be aware of one's operating environment and the differences between the nationalities and ethnicities in the Middle East.

Coalition forces in Iraq are engaged in combat operations against insurgent forces that do not wear uniforms and who take advantage of populated areas to hide in. Despite the challenges this presents, Coalition forces need to integrate an awareness of the Iraqi perceptions of American practices and operations. Tactics such as detaining the family members of anti-Coalition suspects, destroying the houses of captured suspects without judicial due process, and shooting at Iraqi vehicles that attempt to pass Coalition vehicles on major highways may bestow

short-term tactical advantages. However, these advantages should be weighed against Iraqi sentiments and the long term disadvantages associated with the image that this creates.

It is a practice in some U.S. units to detain family members of anti-Coalition suspects in an effort to induce the suspects to turn themselves in, in exchange for the release of their family members. In at least one such example, a note to that effect was left by American forces. Whereas this might have the immediate desired effects, the detention of women and children without due process contributes to a lasting negative image of the U.S. military in the eyes of the Iraqis and could thus severely undermine overall U.S. goals in the region. Such practices further show a disregard for the Iraqi culture. Women and children, for example, contribute to the honor of men and families. Their detention conveys that the U.S. is not honorable in its dealing with the Iraqi people.

When it is necessary to detain Iraqis, it is important that timely and accurate information be provided to the families of the detainees via the Civil Military Operations Center (CMOC). Initially, in Iraq, it took several months for information concerning detainees to be transferred to CA forces. This was later reduced to about two weeks, with the information being accessible on a SIPR webpage. The lesson learned is that this information should be provided to the families as soon as possible so as to avoid the appearance that the U.S. is secretly detaining or possibly executing Iraqis. This was a common tactic of the Saddam Hussein regime that the U.S. should not be associated with.

It is a common practice amongst U.S. forces to fire warning shots in the direction of civilian vehicles or at civilian vehicles that are attempting to pass slow-moving convoys along major highways in Iraq. Although this may be perceived to contribute to the immediate short-term protection of American forces, this policy varies by unit and region in Iraq and is not accompanied by an information campaign to inform Iraqis of the dangers of approaching American convoys from the rear. This is particularly important while operating in other Coalition sectors where this is not a common practice. The British sector, for instance, is relatively free of anti-Coalition attacks, yet American convoys moving north from Kuwait from the British sector have fired at British contractors who drove near the American vehicles on a major highway.

A common sentiment amongst Iraqis is that the U.S. is in Iraq for its own economic interests and not for the greater welfare of the Iraqi people. Additionally, in a culture where honor plays a major role and where gaining the acceptance of the population is critical to mission success, it is important for American Soldiers to have a positive image. Along these lines there have been confirmed cases in both the British and American sectors of Coalition forces stealing money from Iraqis on raids. While these do not represent official Coalition policy or practice by any means, these examples can be used by anti-Coalition elements to mobilize anti-Coalition sentiment by conveying that the Coalition is not honorable nor does it have the best interests of the Iraqi people in mind.

Historically, in the Middle East it has been difficult to neatly differentiate between religion and politics. Consequently, in addition to being a place of religious worship, mosques have often been used for political activism and even military operations. In Iraq, it is thus often necessary for U.S. forces to enter mosques in order to search for weapons or arrest suspects. Because of the sensitivity of entering a mosque, however, American forces have adopted TTP to minimize the impact. These include the use of Iraqi Police (IP) and/or Iraqi Civil Defense Corps (ICDC) as the lead elements in entering the mosque. When IP or ICDC are not available and Americans must enter the mosque, the use of translators to explain U.S. actions is absolutely mandatory. Prior to entering a mosque, a worshipper is required to remove his shoes and wash his feet. This is unrealistic for American Soldiers conducting a raid. To circumvent this, American Soldiers have adopted the habit of placing plastic surgical booties over their boots. If it is necessary to arrest an Imam (Muslim cleric), it is important that this action be accompanied by an information

campaign that explains why the person is being arrested. Additionally, coordination should be made immediately with the Ministry of Religious Affairs to have a replacement Imam as soon as possible. As a general rule, mosques should not be entered or raided on Friday, the Muslim day of worship.

American forces have engaged in the practice of destroying the houses of anti-Coalition suspects. Whereas this might appear to be an effective measure, the destruction of private residences creates animosity amongst many Iraqis. This is a sensitive issue that needs to weigh short-term military success against longer term anti-American sentiment. Additionally, the destruction of houses used by insurgents is a common tactic used by the Israeli military in the occupied territories of the Gaza Strip and the West Bank. The tactic is known throughout the Middle East and highly publicized by the Arab media. Aside from the immediate hardships imposed on the family members who lived in the house, the association of the U.S. with Israel undermines the image of the U.S. providing the Iraqis with liberty and democracy under the aegis of Operation Iraqi Freedom. In the past, American forces have mistakenly raided the wrong house and in some cases caused significant damage to the house and hardship to the occupants. Given the multiple sources of information and lack of street addresses in many areas, this is perhaps unavoidable. To address this, however, one division created a "Task Force Neighborhood." The task force is basically a collateral damage response team that repairs damages and processes claims within twenty-four hours of the raid/search and explains the mistake. The team is composed of engineer, CA, psychological operations (PSYOP), and legal personnel.

Even when the right house or person is targeted, CA forces need to be able to explain US actions to the Iraqi populace. Consequently, CA forces need to be involved in all planning processes for operations affecting Iraqi civilians and all command and staff elements should be fully briefed by Army lawyers concerning the legality of different types of US actions. Additionally, maneuver units should have a feedback mechanism for assessing the impact of their operations and ascertaining host nation opinions and sentiment. Without doing so, American forces have no idea if actions such as destroying houses are effective or counterproductive.

Currently, American forces are operating in a relative vacuum of Iraqi sentiments. This stems from a lack of utilizing methodologically acceptable survey techniques continually throughout U.S. sectors in Iraq. The limited perception of Iraqi sentiments comes largely from a reliance on translators or Iraqis who visit CMOC. These people are not necessarily representative of wider Iraqi sentiments and could present a significantly skewed picture of Iraqi perceptions and attitudes. This contrasts with the British, who have developed a 20-question survey that is continually administered throughout their area of operations.

Inherent to virtually all operations in Iraq is the need to operate in crowds of Iraqi civilians. Such crowds may range from curious children, to impassive bystanders, to politically oriented crowds. Improper reaction to crowds could result in compromising the security of Coalition members or causing ill will amongst Iraqis by overreacting in the form of using violence or giving the impression of fear or panic.

Consequently, it is important that U.S. military receive training in how to deal with crowds in Iraq. This is all the more important given the light footprint and firepower often exhibited by CA forces. Interaction with crowds can also be augmented through situational and cultural awareness. The areas around mosques on Friday are generally crowded and often politically/ideologically charged. Additionally, peak hours in the local markets can increase the size of crowds.

When dealing with crowds that are potentially threatening, methods alternative to yelling, shoving, threats, and violence exist. These include use of Iraqi police, use of translators, the

hasty establishment of symbolic barriers (such as engineer tape), physical barriers (such as concertina wire), as well as engaging directly in conversation with members of the crowd.

Coalition forces operating in Iraq are faced with a number of Muslim religious holidays. The Haj and Ashura are particularly noteworthy not only because of their religious significance, but also because they involve the cross border movements of thousands of people. For instance, forces throughout Iraq recently had to deal with roughly 70,000 pilgrims going to Saudi Arabia for the Haj. The majority of the pilgrims took an overland route through the Western Desert (Anbar Province) and drove into Saudi Arabia. Thirty-two thousand pilgrims were transported by air from Kuwait City. This involved gaining country clearance into Kuwait and obtaining visas from Saudi Arabia. This affected tactical-level maneuver and CA units in that they were faced with establishing a temporary camp in Safwan for 32,000 pilgrims while they were awaiting their Saudi visas. The actions of CA forces involved erecting tents, providing food and water, and coordinating directly with the Red Crescent. Ashura is a Shia religious holiday that involves movement of tens of thousands of Shias from Iran and Iraq to Najaf and Karbala (central Iraq). Like the Haj, it is an annual event that is considered a religious requirement. The prevention of pilgrims from fulfilling either the rituals of the Haj or Ashura will have negative national and international consequences. Consequently, it is critical that CA forces be properly educated to advise commanders on the importance of providing security, support, and passage to Muslim pilgrims. It is noteworthy to mention that this is not limited to Iraq. Coalition forces operating in Afghanistan have similarly had to take measures to facilitate the movement of pilgrims to the Haj.

Lessons Learned

- Conduct Iraq-specific training....do not conduct generic Arab culture training or Middle East training.
- There must be a mechanism to monitor Iraqi opinion and sentiment.
- CA should be integrated into the planning process to help assess second order effects of military operations involving Iraqi civilians.
- Weigh short-term tactical gains with long-term implications and second order effects.
- Tribes in Iraq are a reality and should be dealt with from a position of understanding of their roles and power. Failure to do so can result in their gaining disproportionate power to the exclusion of educated Iraqis and those not affiliated with the more powerful tribes.
- It is inevitable that mistakes will be made and that collateral damage will occur. Make provisions to amend and address mistakes.
- Beware of religious holidays, especially those involving the transnational movements of thousands of people.

DOTMLPF Implications:

Training: Opinion sampling, survey techniques, and their operational integration need to be stressed in the CA and PSYOP courses.

Training: An orientation to the nature of contemporary tribal structures in the USCENTCOM AOR needs to occur at the U.S. Army John Fitzgerald Kennedy Special Warfare Center and School (USAJFKSWCS) Regional Studies Course.

Table of Supporting Observations

Observation Title	**CALLCOMS File Number**
Crowd Control Training	10000-25974
Collateral Damage	10001-29730
Area Knowledge and Language Capability is Critical in Iraq	10000-83709
Kuwaiti Translators	10001-21737
Tribal Policies	10000-97902
Surveys of Iraqi Populace	10000-67032
Detaining Relatives of Anti-Coalition Suspects	10000-38938
Shooting at Civilian Vehicles	10000-35897
Raiding Mosques	10000-75600
Personal Iraqi Property	10001-26882
Task Force Neighborhood	10002-37475
Tribal Leaders	10000-53235
Religious Holidays	10000-19008
CMOCs need to be advised of Iraqi Detainees	10000-26307

Chapter 2: Civil Military Operations - Civil Affairs
Topic D: MTOE Issues

Observation Synopsis

CA elements were faced with equipment challenges in the areas of communications, weaponry, and mobility.

Force protection requirements in most theater areas dictated that convoys possess at least two crew-served weapons. Not all CA direct support teams possessed a crew-served weapon. By MTOE, general purpose CA battalions are authorized only four M249s in total. Early in the operation, resourceful CA units obtained the consent of maneuver commanders to use confiscated or captured foreign weapons, specifically the AKMS and the AK-47. These weapons provided greater firepower in relation to M9s and M16s. CA commanders and team members believe personnel must be trained on the safe handling, operation and maintenance of these weapons. The weapons and ammunition are easy to obtain from the BCT for training on ranges. CA elements had to rely on crew-served weapons to be provided by the supported unit until additional M249s were shipped to theater from the Continental United States (CONUS). Until CA Soldiers could be familiarized with the weapon system, the handover of an M249 was inadequate. Supported units had to also provide gunners.

The suite of communication equipment provided to CA elements also proved inadequate. Specifically, only one multi-ban intra-team radio (MBITR) was issued per team. This arrangement prevented a team that was split between two vehicles from communicating since not all vehicles were outfitted with the single channel ground to air radio system (SINCGARS). Many CA teams relied on commercially-bought, unsecure two-way radios. The need for vehicle-to-vehicle communication, given the threat to direct fire ambush and improvised explosive device (IED), cannot be overstated. Equally imperative was the need for the CA element participating in a meeting to communicate with the CA element elsewhere in the building or outside with the vehicles.

The harm to both personnel and equipment from IED is greatly reduced when traveling in an up-armored HMMWV. The need for increased vehicle protection is a Coalition-wide concern. CA units in theater had their soft-skinned vehicles hardened. Steel doors and steel walls for the troop beds were retrofitted onto HMMWVs (Figure 1). The steel enclosures on the rear were designed with an open area at the rear base to allow for grenades to be kicked out (Figure 2). The availability and use of up-armored HMMWVs would significantly improve CA team force protection.

Figure 1. 4-seat HMMWV (side view)

Figure 2. 4-seat HMMWV (rear view)

The M16A2 rifle had multiple disadvantages when carried and used by CA personnel. As a full length battle rifle, the M16 is seen as an offensive weapon by the civilians, non-governmental organization (NGO) personnel, and CPA personnel with whom the CA teams work in meetings and in street contacts. This often sends an unintended and undesired hostile message from the teams. In contrast, an M4, with its more compact size, is likelier to be viewed as a more defensive weapon and less intimidating. When the M16 is used in convoy defense from a HMMWV, it is difficult to move and aim within the confines of a vehicle. Likewise, in a

dismounted scenario, the long profile of the weapon does not allow it to be rapidly rotated forward from a slung position.

Lessons Learned

- The minimal number of crew-served weapons in CA units creates a force protection drawback. Soldiers need to be trained and familiar with the M249 SAW.
- CA units lack enough intra-team radios.
- The threat to personnel in light-skinned vehicles is great. Enhanced armored vehicles provided CA Soldiers increased protection.
- The M4 carbine offers many advantages in comparison to the M16 rifle for the CA Soldier.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
CA teams were under-equipped	10000-78432

Chapter 3
Engineer

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Summary

During OIF stability operations and support operations, units at all levels conducted operations that were not necessarily considered their primary missions. While U.S. forces were trying to "win the hearts and minds" of the Iraqi people, non-compliant forces were continuously observing U.S. forces to identify vulnerabilities. The enemy attacked those vulnerabilities at the time and place of his choosing. Units had to develop their battle skills in an "on-the-job" training mode to cope with the ever changing complexion of the battlefield. There were no safe zones for U.S. forces in Iraq. Every U.S. operation had to be planned, prepared, and executed as a combat operation. Units had to revisit every operation so that successes and lessons learned could become a part of the new script.

This chapter highlights the significant observations and lessons learned from current combat operations in OIF. While every area of operation was a balance between civil-military operations and combat operations, it is important to understand that combat arms, combat support (CS), and combat service support (CSS) units conducted combat operations daily. Due to the broad scope of missions, tempo of operations, and vast battle space, most of these combat operations were planned and executed at the company and platoon level. The observations and lessons learned in this chapter are intended to assist future deploying units to better understand the operational environment and facilitate pre-deployment training.

This chapter also addresses the issue of infrastructure repair/replacement. Commanders learned early on that Commander's Emergency Response Program (CERP) funds could and would help "win the hearts and minds" of the Iraqi people. Commanders found that these funded projects helped develop community stability and increased the amount and validity of human intelligence received from the local population. This program did not evolve painlessly, but the benefits derived have absolutely saved lives and promoted improved relations with the Iraqi people.

Chapter 3: Engineer
Topic A: Mobility, Counter-Mobility, and Survivability

Observation Synopsis

Engineers faced many and varied tasks/missions upon arrival in Iraq. Forward operating bases needed to be constructed. Base infrastructure became the primary engineer mission and with the development of force protection for entrance gates and fighting positions. Because their mission was going to be a temporary one based upon mission guidance, class IV materials were not included in their basic loads. They soon found out that class IV materials were very short in the theater. Some units had had the foresight to prefabricate guard towers before moving into the AO. These towers worked well to a point, but lacked the structural integrity to support the sandbags necessary for overhead and side protection. Hesco-bastion baskets and New Jersey barriers proved to be the items of choice for serpentine traffic layouts and vehicle checkpoint locations. Care had to be taken in their installation to insure that IEDs could not be hidden in or around these devices. Baskets needed to be capped so that devices could not be buried in the dirt fill material on top. Baskets also needed to be keyed into the earth to avoid being blown out when mortar rounds landed close in front.

Berms, Hesco barriers and New Jersey barriers were difficult to construct and move. The combat engineer brought the bare minimum of equipment to complete this type of construction and found that leasing the necessary equipment in country was not an easy task. The biggest equipment shortfalls included front-end loaders, cranes, small emplacement excavators (SEEs), and bobcat-type loaders. The armored combat excavator (ACE) commonly found in the combat engineer battalion proved adequate for berming operations but had its hands full when trying to penetrate hard or rocky soil. Maintenance of the major drive systems on the ACE proved to be a challenge to company mechanics. Equipment associated with a combat heavy battalion was needed to perform the construction mission of base camp development, but few of those resources were available.

On top of the base camp development task, it was soon determined that not enough personnel were available to support cordon and search operations, convoy security operations, and general site patrolling. Because fighting as infantry is a secondary engineer mission, combat engineer personnel were chosen to plan and execute these missions. Problems surfaced immediately. The combat engineer did not have the infantry weapons, laser sights, and night vision devices necessary to insure operations success. In addition, the engineer vehicles needed were not up-armored and most lacked crew served weapons mounts. If a vehicle did have weapon mounts, most did not include armor around the mount to protect the firer. The engineer Soldier went about his business and fabricated what he needed and mounted it where he needed it. Things have improved dramatically since the beginning of the war. More up-armored vehicles are arriving and laser sighting equipment is being provided to the units needing these systems. Improvements can still be made by equipping HMMWVs with infrared headlight systems to enable drivers to move in a blackout mode but be much more aware of their movement area than what blackout drives allow. Special portable lighting systems could be provided that would shine high intensity light away from a vehicle checkpoint or security gate, thus making it more difficult to see the Soldiers manning that point.

The Tigris and Euphrates Rivers and their small tributaries provided safe haven to many of the insurgents trying to destabilize the U.S. mission in Iraq. Both rivers had small islands that needed to be patrolled because, in many cases, they were part of the terrorist escape route. Boats for patrolling and insertion of forces were inadequate for the mission requirements. The engineer began using bridge erection boats when the initial bridging tasks were completed. They also had access to small assault boats found in the multi-role bridge company inventory. Neither type really met the requirement. The assault boats were too slow and hard to maneuver in the

swift currents encountered. The bride erection boat, although powerful, still lacked the speed for insertion operations and did not come equipped with the proper types of weapon mounts for crew served weapons.

Although the combat engineer lacked the mission essential equipment to conduct cordon and search operations, convoy escort duties, and general site patrolling, they were able to utilize what they had to complete the mission. The ability for individual Soldiers to communicate with one another during tactical operations was a significant shortfall. Walkie-talkies bought at home station were the radio of choice. Although they lacked secure capability, they were effective for man-to-man communications. Squad leaders needed immediate contact with squad members during cordon and search operations. Convoy commanders had to be able to talk to all of their vehicles to coordinate a response in the event of terrorist attack. Patrol leaders required immediate information to respond to challenges caused by civilian traffic flow in their area of operations and movement of civilian personnel. Individual communications equipment is essential for tactical movement and movement to contact operations.

The most significant shortfall faced by engineer commanders concerned training for the fight in an urban environment. Training for this type of combat was completed during much abbreviated training sessions at mobilization stations or while at home station. Emphasis was not placed on these missions because combat engineers usually are involved in breaching operations and general engineering missions. The same can be said of other types of CS and CSS units. Training for fighting in an urban environment was secondary or even tertiary to their primary missions. Brigade combat teams had active duty and reserve military police units interwoven into their structure. This resource provided the training help needed by commanders to prepare their CS and CSS personnel for fighting in an urban environment. The civilian police skills brought to the battlefield by National Guard and Army Reserve units was, without a doubt, the centerpiece of cordon and search operations.

Lessons Learned

- More up-armored vehicles with crew served weapons mounts need to be provided to engineer units faced with tactical convoy security operations, cordon and search operations, and general area patrolling missions.

- Individual communications equipment that can operate both secure and non-secure needs to be included in the combat engineers equipment requirements.

- Weapons for tactical squad operations must be provided to combat engineers. Thermal night vision goggles and laser sights should be a part of this package.

- Boats for river patrolling should have crew served weapons mounts, have high speed capability, and be capable of carrying at least a complete squad with weapons.

- Class IV materials may not always be available in the theater and may have to be brought forward during initial movement to contact. Pre-fab construction of guard towers must take into consideration total load requirements to support sandbag walls and roofs.

- Urban combat training for combat engineers must be incorporated and prioritized in their training plans.

DOTMLPF Implications

Material: Change the combat engineer battalion MTOE to include weapons, vehicles, and equipment to support infantry operations, especially cordon and search operations.

Training: Prioritize infantry combat operations in the engineer battalion training criteria.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Weapons	10000-22970
Communications in convoy operations	10001-89551
Utilization of night vision goggles	10001-04895
Bridge erection boats	10000-34188
Constructing entrances and traffic control devices at forward operating bases	10000-51480
Role of the combat engineer in phase IV operations	10000-39917
Engineer equipment	10001-03824
Soldier fighting positions	10000-19872
Headlights on HMMWVs	10000-10263
Laser sights on weapons	10001-21670

Chapter 3: Engineer
Topic B: Combat Engineer Operations

Observation Synopsis

Roles and missions for the combat engineer in the area of responsibility (AOR) have been much diversified. Training for these roles has fallen into the category of on-the-job training. The combat engineer has had to function as an engineering operations division (EOD) specialist, cordon and search expert, and aviation coordination point of contact. Engineers have had to adapt to an ever-changing battlefield and meet requirements normally not associated with the engineer mission. Because the engineer has shown his ability to be flexible and capable of thinking outside the box, the demands of civil affairs (CA), CSS, and of becoming the infantry war-fighter needed to sustain combat operations have all been handled successfully.

Future operational environments will place a greater premium on versatile organizations capable of adapting to changing threats and missions. Engineer organizations at the BCT level must sustain force mobility (track & wheel) on various types of terrain, to include urban. Assured mobility depends on reconnaissance. There are no dedicated engineer reconnnaissance resources in sapper battalions. Sapper battalons also lack vertical, horizontal and utility capabilities.

Habitual support is vital due to importance of teamwork/integration at the BCT level and below. Distributed operations over large areas often require sapper battalions to operate pure or as a battalion task force. Sapper battalions lack key CSS assets that limit their ability for independent operations.

Divisions normally require a divisional engineer headquarters (HQ) and engineer group HQ to support engineer command and control (C2) requirements. A brigade (BDE) HQ and combat group HQ lack construction design and management sections which reduces ability to C2 the construction effort. In addition, it also lacks an S5 section to leverage local resources and integrate engineer effort with CA efforts and other humanitarian efforts. Because of the austere admin/log (S1,S4,BMT) section within the HQ, its ability to provide effective, responsive support to supported elements is inhibited.

Primary utility of the engineer group (EN GRP) HQs is the ability to C2 construction and sustainment engineering operations. Because of the organization and war trace, training tends to be focused in one area, either combat focus or construction focus.

To reinforce the BCT, Reserve and National Guard units are attached to supply the CS and CSS not organic to the brigade. Mobilized reserve component units spent too much time at mobilization stations revalidating their training level. The required validation should be completed at home station prior to mobilization. This would reduce the required time to integrate the unit into the brigade. Current doctrine does not offer TTPs for integration of eschelon above divisions (EAD) units into a division. This process requires deliberate planning and execution.

Replacement operations do not exist for reserve component units. When personnel are rotated out of the theater for specific personnel actions, backfills are not provided. Over the course of a few months, the reserve unit strength may decrease by as much as 25 per cent. Personnel recruited at home station during the period of mobilization are not rotated forward when their initial training is completed. They can only move forward upon a susequent mobilization.

A reserve component (RC) unit's low supply readiness (MTOE, preliminary load list [PLL], allowable supply list [ASL]) degrades its ability to integrate into operations. The system to provide them with repair parts and PLL supplies often lags their arrival in theater by months. This causes the supporting brigade to provide for these shortages until the system catches up.

Engineer recon platoons are not incorporated in the line companies of the combat engineer battalion because of the belief that line squads can be called upon to do this task. In most cases this philosophy will not provide the value added capability of a well-trained and equipped recon element. Many battalions form their own highly mobile, specialized engineer reconnaissance force by using scrounged equipment and Soldiers reassigned from within the battalion. Engineer battalion commanders in Iraq have had to complete missions for which they had not trained, acquire assets in the AO to achieve these missions, and deal with a counterinsurgency operation that required combat multipliers that reconnaissance could only provide.

The missions the engineer reconnaissance platoon (ERP) was called on to conduct fell into four broad caegories. The first two are missions for which the ERP had trained. The last two were required out of tactical necessity. The tasks are:

1. Technical reconnaissance
2. Tactical reconnaissance
3. Force protection missions
4. Raids and cordon operations

The tasks of route classification and river gap reconnaissance were both practiced often. Manuever units were forced to be expedient in moving to and setting up check points, getting equipment from A to B as quickly as possible, and crossing rivers to aleviate long road marches to get to designated locations.

The most important addition the ERP brought to the battalion was that of operating independently while completing intelligence missions to support cordon and search operation, locating and identifiying captured enemy ammunition and unexploded ordnance, and providing security for convoy movements.

The traditional combat engineer battalion missions of mobility, counter mobility, and survivability battlefield operating systems (M/CM/S BOS) are being replaced by a light infantry mission. The task force accomplishes this mission with a blend of branches that brings important resources to the urban fight. HMMWV mounted engineer reconnaissance elements and armored personnel carriers are ideal for quickly dismounting ground forces in the tight, constricited streets of most Iraqi villages and cities. The sappers of the EN battalion (BN) conduct demolitions removal of unexploded ordnance (UXO) and IED with the help of explosive ordnance disposal (EOD) detachments, conduct mounted and dismounted combat reconnaissance patrols, establish ambushes and flash checkpoints, and conduct raids to detain high value target (HVT) individuals and weapons caches.

The assigned task force HMMWV-based military police (MP) company assisted in Iraqi police restoration, establishing a detention system for criminals, conducting convoy escorts, and conducting raids with their special reaction team. The establishment of an undercover detective force was instrumental in developing intelligence for the conduct of raids as well as sting operations. The engineer battalion and the MP company had complimentary skill sets suited for the urban battlefield and enabled the task force to become the quick, responsive, and precise force needed in the city.

Lessons Learned

- Infantry training needs to be incorporated into combat engineer training, i.e., squad tactics, cordon and search operations, and communication with air assets during patrolling operations.

- The stability operations, support operations (SASO) mission requires units that are flexible to meet mission requirements. In many cases, the skill sets necessary to meet these requirements, because of doctrine, are not organic to units in the AOR.

- CSS requirements for sapper battalions operating outside their doctrinal mission puts a gigantic strain on organic support systems and personnel.

- Infrastructure rebuilding is not a mission normally assigned to a sapper battalion. Skilled personnel to meet mission requirements are part of the MTOE.

- Construction design and management sections are non-existent in the EN BDE or EN GRP HQs.

- Local resources are difficult to resource because admin/log sections of a BDE HQ do not have the personnel to administer the support.

- Many times task organization leaves a shortfall in either the construction of combat mission capability due to unit alignment or MTOE.

- Reserve units could be pushed through the mobilization process if the revalidation process was more efficient.

- Replacements for reservists leaving the AOR need to be backfilled much like the process used with active duty units.

- Push-packs of essential supply items need to accompany reserve units into the AOR.

- An independent recon platoon in a combat engineer battalion provides the battalion CDR with flexibility in how he accomplishes intricate non-engineer missions.

- Equipment and resources need to be designated in the MTOE to support this reconassisasnc mission.

- Waiting for reconnaisance assistance will waste unecessary time for mission accomplishment.

- Combat power must be preserved when operating in a large urban area of operations. Using a combat engineer battalion with various supporting National Guard and Reserve companies can extend a BCT's combat capability.

- Reserve and National Guard companies bring special talents to the field that may be over and above their mission requirements.

- Urban combat requires a mix of vehicles and personnel capable of operating in confined spaces. This same unit must be mobile and fast to meet the requirements defined by terrain and counterinsurgents.

DOTMLPF Implications

Training and Doctrine: Increase infantry training for the combat engineer with an emphasis on fighting in an urban environment.

Organization and Force Design: Develop and resource the addition of a reconnaissance platoon in the combat engineer battalion.

Organization and Force Design: Enhance the CSS capability within the sapper battalion to provide support for missions outside their doctrinal mission.

Material: Provide push-packs of essential supply items (PLL and repair parts) to accompany reserve units during their initial move into theater.

Training and Doctrine: Build in construction design and management sections in the EN BDE/GRP HQ.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Sapper Battalion versatility	10001-59544
Brigade/Group HQ too austere for full scale C2	10001-01640
Reserve mobilization	10000-50600
Engineer recon platoon in combat	10000-93473
Maneuver task force	10000-25256
Difficulty in receiving repair parts	10000-46818
Vehicle service requirements	10001-49573

Chapter 3: Engineer
Topic C: EOD, UXO, Captured Enemy Ammunition Mission

Observation Synopsis

Roles and missions for the combat engineer in the AOR have been much diversified. Training for these roles has fallen into the category of on-the-job training. The combat engineer has had to function as an EOD specialist, cordon and search expert, and aviation coordination point of contact. At the present time, the mission of finding and disabling IEDs has become one of the engineer's primary counterinsurgency missions.

IEDs have become the weapon of choice for the Iraqi insurgents. The threat posed by these devices is limited only by the imagination of the enemy, the munitions available to him, and the deterrent effect of the would-be target. It is imperative that the Coalition Soldier be encouraged to "THINK TERRORIST" and attempt to undermine his opportunities by presenting a difficult target. Terrorist attacks seldom follow identical patterns; however, if an attack has been successful, it is likely to be repeated if the opportunity presents itself again.

It is not difficult for the enemy to locate the weapon of choice. Millions of tons of captured enemy ammunitions have been found throughout the country of Iraq. It is found in bunkers, buried caches, and sometimes lying out in the open. It has been impossible to secure and/or destroy all of these sites. EOD detachments are overwhelmed with work and the engineer has been pushed into the mission of securing and developing plans to destroy the captured munitions.

The Iraqi insurgent has found that it is a simple task to acquire the explosive round, secure a device for detonation, and plant it at a location that will do the most damage. Commo wire from abandoned Coalition base-camp sites has been found connected to many devices used against our own forces. It is imperative that we police up after ourselves or we become our own worst enemy.

To counter any threat, personnel need to remain vigilant, maintain a high state of situational awareness, and be able to identify combat indicators. Units able to establish a detailed knowledge of the "pattern of life" in their AOR are at an advantage, as often there are tell-tale signs that an incident is about to take place. Alert personnel may spot insurgents completing a preliminary site reconnaissance or even setting up for an incident. The key is to recognize **the absence of the normal or the presence of the abnormal**. Little things like windows or doors open or shut during the wrong time of day, smoke from a house chimney at the height of a summer's day, or vehicles unusually low on the suspension are all potential abnormalities that might indicate threat potential. Too often, Soldiers have seen evidence of an attack but have failed to act upon it. It is imperative that all combat indicators are reported, recorded, and acted upon. These indicators are the driving force in making us do business, not as usual, but with forethought and planning.

The desired solution is to find the IED before the attack. So many times this has not been the case and we have paid for our mistakes. The British, because of their vast experience in dealing with explosive devises, attack the problem from a forensic standpoint. When a device is found, either before or after detonation, a group of experienced professionals examines the scene of the "crime." A complete review of the situation is documented by a combined explosive exploitation cell (CEEC). Their mission is to extract each and every variable related to the origin and execution of the incident. Information collected includes real time data, location, presumed target, and casualties. In the background information, construction of the device, how it was placed, and what components were used, is logged. The goal of the investigation is to

determine the source of material, how it has been utilized and what modifications have been completed that might make it different from other attacks. All information is compiled and placed in a database so that incidents can be analyzed to determine similar characteristics that might lead to source of supply or other incidentals that might prevent a similar attack in the future. This gives investigators a starting point to perhaps track down retailers that might supply a certain type of timing device or other incidental part. This forensic approach is a proactive method to take the advantage away from the insurgent.

In the EOD arena, numerous caches of captured enemy ammunition and unexploded ordnance has been discovered and secured. BCT commanders have called upon the combat engineer, division artillery, and any other type of combat or combat service support unit to help in securing these sites until destruction of the ordnance is completed. The mission for destroying these lethal caches has usually been handed off to EOD detachment. Because of the overwhelming number of caches and the many and varied types of ammunition, EOD units have been able to inspect and evaluate most sites but have been unable to keep up with the required captured ammunition (CA) destruction.

Unexpended enemy ordnance has been the material of choice for constructing IEDs, thus the sense of urgency to eliminate it as a source for weapons material. The combat engineer has been trained in explosives and demolitions. His training includes the use of Bangalore torpedoes, mine clearing line charge (MICLIC) and command and control, communications and computers (C4). How to properly use these devices to be more effective has become part of an on-the-job training program. The problem most encountered by the engineer is what type and how much explosive should be used to detonate captured ammunition. Secondly, what type and how much explosive should be used to detonate a missile versus an artillery round, and will sub ammunitions be subsequently scattered when a missile is detonated. A training manual or field manual needs to be developed that shows illustrations of different rounds and the types of explosives needed to detonate them. This manual should illustrate how the ammo should be stacked, where the demo charges should be placed, and how much and what type of explosive should be used to insure complete elimination.

Current doctrine and employment places one EOD company in general support (GS) to each division. The basic unit of action is a team operating in support of a BCT. There are not enough EOD teams to destroy/clear all UXOs and caches found in the AO in a timely manner and stay in synch with OPTEMPO. EOD companies lack C2 and span of control to synchronize operations at both division level and with all BCTs. LNOs are needed at all levels to insure coordinated activities. There is no higher headquarters at the division level to provide operational oversight and guidance, enforce division/BCT commander's intent and priorities, and ensure effective support of EOD operations.

Resolution of issues, competing priorities, etc. takes time due to location and focus of EOD battalion. In addition, EOD companies and teams lack CSS to sustain their operations. The GS role of an EOD company reduces "ownership" by the division.

The linkage between the combat engineer battalion trained in demolition operations and EOD detachments is a natural one. This should be sustained for all tactical operations and particularly in the complex urban terrain of Iraq with its recurring terrorist attack profile. The use of IEDs as a stand-off weapon system requires rapid response to avoid unnecessary hazards to civilians and the less attuned logistics convoys that must frequent the streets to acquire support resources. EOD detachments are a rare commodity and maneuver commanders typically turn to combat engineers for assistance when they are not available. Engineers and EOD detachments should work together and should attend a joint training course to develop this skill set and continue to train together in the future.

In a non-chemical environment, a chemical smoke platoon is used for static site security and a chemical reconnaissance section accompanies EOD assets on missions. The versatility of the Fox reconnaissance vehicle being both wheeled and armored with its array of chemical sensors assists in both the security and analysis of an IED or UXO incident. Every UXO is a potential chemical device. Teaming the Fox reconnaissance section with the EOD detachment helped reduce the uncertainty of the chemical threat during the disarming of these explosives.

Having the right kind of equipment to find and clear IEDs and UXOs has been a challenge faced by many engineer commanders. One engineer battalion has developed their array of equipment and personnel for main supply route (MSR) clearance work. They have effectively used two sapper squads with 1-MEERKAT IVMMDS, 1-BUFFALO, 1-MCAP Dozer/M916/Lowboy, and 2-M1114 up-armored HMMWVs. This team is able to clear rights-of-way of material in which IEDS could be stored and remove/detonate devices found. This method of operation is of great value because areas, once cleared, do not have to be secured constantly. Casual observation can then be used to determine the presence of the abnormal.

Lessons Learned

- It is difficult to support EOD operations based on command relationships and CSS requirements.
- There are too many UXOs and captured enemy ammunition caches for EOD to handle. Not enough time to inspect, recommend removal criteria or secure site until EOD can complete destruction.
- Engineers support EOD with security, both for the unit and discovered undestroyed sites.
- IEDs can be located anywhere. Watch all areas along traveled ways at least up to head level.
- Think like a terrorist.
- Look for changes in the normal and look for the abnormal.
- Do not become a person of habit.
- Vary routes and timing for vehicular movement.
- Carefully plan convoy movements.
- Look for patterns that might indicate the presence of an IED.
- Combat engineers need extensive training on EOD techniques.
- Methods for detonating different types of captured ammunition need to be published for use in the AO.

- Unexploded ordnance is a prime device utilized in building IEDs.
- Weapons and ammo caches are so prevalent that manuever forces do not have the time to effectively eliminate all in the initial destruction phase. Ordnance blown outside blast perimeters has to be accumulated and redetonated.
- C4 is the favored material used to destroy captured enemy ordnance.
- EOD units are not capable of eliminating all caches found. Combat engineers using their demolition expertise have picked up the bulk of the operation.
- A rollup of demolition practices used by division artillery (DIVARTY), EOD units, and combat engineers needs to be developed to help derive an efficient method which maximizes the use of time and materials.

DOTMLPF Implications

Training and Doctrine: Combat engineers and EOD personnel should receive the same training necessary for the destruction of captured enemy ammo and unexploded ordnance.

Training and Doctrine: Training Manuals/Field Manuals should illustrate type, quantity, and how to attach explosive to any type of CA or UXO discovered in the AO.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Police the Battlefield	10001-32678
EOD units in the AOR	10000-26928
Counter Remote controlled improvised explosive device	10000-80028
Role of the combat engineer in phase IV operations	10000-39917
Captured enemy ammunition mission	10000-03058
Police the Battlefield	10001-32678
EOD units in the AOR	10000-26928

Chapter 3: Engineer
Topic D: Commander's Emergency Response Program (CERP) Contracts and Construction

Observation Synopsis

Stability and support operations (SASO) will continue to be the primary missions in Iraq for the foreseeable future. When stability operations began, commanders were delegated CERP funds to complete local projects that would provide immediate benefits to the communities. This program proved to be a force multiplier in that it provided the local commander with tools to address immediate community needs. Iraqi citizens/contractors were hired and paid for by Coalition forces to complete civil works projects that would have an immediate impact on the health and well-being of the community. Unfortunately, commanders lacked the skilled personnel to professionally define the projects they were asked to do. These projects originated locally from neighborhood action councils (NACs). Personnel on these councils had high expectations as to the quality of work and materials incorporated into the completed project. Their expectations were rarely met.

Throughout OIF, contractors selected for construction projects repeatedly failed to meet customer quality standards and delivery dates. Written contracts that defined the scope of work, construction standards, and delivery dates were not used because contract specialists were not available. Engineer staffs in theater were not prepared to take over design-build missions because their focus remained in the warfighting arena. In addition, commanders have not had access to personnel with contract writing ability. A contract agent is available at the division level, but in most cases is so busy with division level contracting that writing and approving contracts for CERP funded projects gets relegated to a "wait in line" scenario. CERP projects need to move quickly to help develop communities and build rapport with the Iraqi people. Because of these problems, money from CERP funds was not utilized to its fullest potential.

To utilize CERP funds, or any funds available in theater to their fullest extent, plans and specifications need to be developed that govern construction or the quality expected when items are purchased and installed. In addition, time lines toward completion are essential in that they determine how much and when a contractor/supplier will receive payment for goods and services delivered. This is not how things began happening in Iraq, but how things should be happening today. Boiler plate contract documents would be useful for small projects and for purchases that are repeated over and over. For large projects, construction contracts need to be written with specifications that can be clearly understood, supplies and provisions should be bought using structured purchase orders that specify quality and delivery times, and projects should be paid for based upon having met contract specifications and specific delivery criteria. One final comment concerning specifications is that Iraqi construction standards are not comparable to Continental U.S. (CONUS) construction standards, and justifyably, the cost of construction to Iraqi standards is not and should not be equal.

The development of the Iraqi forward engineer support team (I-FEST) at the division level helped in the development of large dollar projects. The I-FEST has been very successful in coordinating work through both the engineering community and Iraqi contractors. Both have been found to be very competent and have the ability to complete quality work. In order to insure quality control and quality assurance on these projects, the I-FEST has also had the mission of providing for construction inspection. This has been accomplished by hiring quality Iraqi engineering firms to complete the mission. This has been a successful program after firms with limited experience have been weeded out. The same goes for contractors. Contractors that do a poor job have been eliminated from the contractor pool.

At the battalion level and lower, contracting with local construction companies has been a challenge. It seems that anyone who wants to be a contractor rolls in his wheelbarrows and makes an attempt to go to work. High level community figures have been eager to help assign work to contractors who turn out to be part of their families. These firms have little or no construction experience and are soon weeded out and not used in future projects. Design firms have been hard to find, but once found, have provided quality work. A knowledgeable interpreter is the key to finding quality firms for both design and construction.

Lessons Learned

- Engineering firms and construction firms are located anywhere but may be limited in their ability to provide a quality product. A manager must be cautious in chosing the right firms because many are unable to complete the quality of work expected.
- Work must be closely monitored for quality control and quality assurance.
- An I-FEST team with a knowledgable interpreter has little or no trouble finding the best engineers and contractors.
- Standards for project delivery were not developed adequately in the contract documents.
- Commanders, in most cases, did not have access to contract agents that were familiar with the required documentation that would insure a quality project within a specified period of time.
- Iraqi construction standards are not comparable to American construction standards for the most part. The correct construction standard needed to be specified to eliminate paying more than the project was worth.
- Develop boiler plate contracts suitable for small project construction.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Construction workforce available in the AOR	10000-29348
Contractor Standards	10001-37445

Chapter 3: Engineer
Topic E: U.S. Army Corps of Engineers (USACE)

Observation Synopsis

One of the most formidable challenges faced by a maneuver commander during Operation Iraqi Freedom was that of establishing a forward operating base. After an area of operations was secured, forward operating bases had to be established to house and support troop occupation as well as provide adequate force protection. These facilities were constructed in urban areas with many fixed structures and areas completely void of any hardened structures. Commanders had to make decisions concerning base camp footprint, resource requirements to construct each camp, and facilities to support the Soldier. Decisions had to be made concerning the utilization of containerized troop housing versus tent cities. Electrical and communications grids had to be designed and constructed. Water for shower facilities had to be piped to the correct areas and gray water accumulated at the proper discharge points. Dining facilities had to be constructed to protect food processing areas and troop service areas. And once completed, these facilities had to be maintained for extended durations.

Because of the size of the battlefield, commanders have had to develop many separate plans and requirements for beddown of Soldiers in the area of operations. These plans include the layout of the basecamp, the type of facilities necessary to support the Soldiers during their occupation, and the cost of completing the facilities. USACE recognized early on that the commander, with his many and varied requirements, might need help in designing and developing basecamps. This provided the incentive to develop the base development team (BDT) to do contingency master planning for base camps. Unfortunately, most commanders were/are not aware of the best method for contacting U.S. Army Corps of Engineers (USACE). In addition, many felt that the cost of using USACE was not justified. USACE needs to improve the communication process so that maneuver commanders know how to reach the right person with the right question. This communications simplification should reap broad benefits for USACE as long as the products/services that USACE provides can be shown to add value to the finished product/objective.

TOE units do not have a good grasp of the capabilities of the USACE. They are focused on the mission capabilities of combat engineers. Units have described USACE capabilities as that of a large organization managing infrastructure in CONUS such as lakes, rivers, and dams. They know that some mapping and aerial photography capability is provided by the corps. In addition, there is general knowledge that the corps is involved at a very high level with reconstruction of infrastructure in the AOR. Some units were familiar with the FEST capability because they had worked with a team during a war-fighter exercise or during Operation Enduring Freedom (OEF). At the division level, FEST-A (augmenting) resources have been used in some instances to support BDE level construction efforts. Task Force (TF) Restore Iraqi Oil (RIO) and TF Restore Iraqi Electricity (RIE) have been recognized by many as being the major players in accomplishing those missions with civilians, but much outside of the war-fighter efforts and activities.

To achieve the best utilization of USACE, LNOs need to be embedded at the brigade and battalion level. USACE LNOs would provide the communications link necessary for reach-back and would open the door for problem solving using the many and varied centers of expertise the corps brings to the table. The portable tele-engineering kit used by corps LNOs provides the link-up to these centers of expertise in both a secure and non-secure mode. It not only allows for real time visual communication, but can be used to send data from stateside to the AOR without using internet capability.

Providing these LNOs with a contracting warrant and the capability to originate and develop both large and small projects would significantly enhance the war fighter's ability to use any funding pool made available. The amount of money saved in the past would have more than paid for any cost associated with using the resources available from USACE.

In one BCT's AO, security for route #1 is a high priority. Several abandoned structures along this route provide cover and concealment for potential sniper operations. One structure in particular has been recognized as a prime sniper location. On more than one occasion, convoys and BDE personnel have been the target for small arms fire. The dilemma faced by the commander was how to secure this structure to eliminate the sniper problems. Sending a team to constantly police the building was out of the question due to lack of personnel. The best alternative was the destruction of the building. Two alternatives were evaluated to complete the destruction of the building. The first alternative for leveling the building was through the use of air bombardment. Issues of collateral damage to the roadway and other structures and possible injury to civilians made this solution difficult to execute. The second alternative focused on a controlled demolition of the structure using C-4 or other explosives. The problem faced by the brigade centered around engineering expertise on how and where to place charges to affect a total collapse, how much explosive needed to be placed at each critical location, and what work would be needed to clean up the site after demolition.

The brigade asked the division engineer for help in solving the problem. The division did not have the structural engineers or explosive experts to develop a solution. The division reached back to USACE at its headquarters, stateside. USACE immediately forwarded the request for help to their center of expertise on demolitions and explosives. Structural engineers were called in to review photos of the building and determine the critical explosive locations. Other engineers determined the explosives necessary to drop the structure. Within a matter of days, the solution and subsequent results were forwarded back to the division HQ. The division was very complimentary to USACE for their quick response.

Lessons Learned

- Liaison with the corps should be directed through the FEST-A embedded with the division
- Simplifying communications between maneuver commanders and USACE is an important objective.
- Engineering expertise in the areas of base camp development is a plus to maneuver commanders. USACE has this expertise, but has to get the message out to the commanders in the AOR.
- Embedded USACE LNOs would enhance communications between USACE and the BCT commanders.
- FESTs bring added value to the AOR. Technical assistance to the division commander and the ability to reach back has been invaluable. This capability needs to be better advertised to the commanders in the AOR.

- Forward engineer teams (FETs) would be a valuable asset for base camp facility management prior to the arrival of contract operations.
- Demolition of structures may cause extensive collateral damage and injury to civilians if not done correctly.
- The USACE has experts in structural engineering and explosive demolitions.
- Response time for solutions from the USACE is rapid after base information is received and the problem identified.
- USACE needs to educate leaders at all levels about resources they bring to the table.
- USACE needs to be more flexible in providing those resources to insure that there is value added in their contributions.
- USACE LNOs need to be attached at every HQ and those LNOs have to be aggressive in advising and assisting commanders at all levels.
- The expertise USACE has in the contracting arena needs to be distributed to all levels of command. These contract agents need to be both civilian and military to be able to adequately support the manuever commander.
- The tele-engineering kit is an asset that commanders at all levels could profit by. Information concerning its capabilities and reach-back potential both in secure and unsecure environments must be advertised. This includes its portable capability.

Table of Supporting Observations

Observation Title	**CALLCOMS File Number**
USACE mission in the AOR	10000-91728
Reach-back to USACE	10000-03667
Utilization of FETs and FESTs	10000-05292
Contract support	10001-37280
BDTs	10000-92308

Chapter 4
Combat Service Support

Chapter Contents **Page**

Summary

There are areas within the combat service support (CSS) battlefield operating system (BOS) currently executed in OIF at the division and brigade level that warrant special attention. Supply, maintain, and sustain the force (topics A, B, and C) highlight several particular areas which are critical to combat operations in OIF. One example is a brigade combat team's (BCT) inability to distribute and hold water by MTOE under Force XXI, and its inventive solution to alleviate the storage problem called the "camel rack." Another example is a major organization's direction of mass cancellation of all backordered OIF customer requisitions. A third critical point is the successful role class IX expeditors continue to play in the delivery of replacement and repair parts in the theater of operations. A fourth important area is the challenge Coalition Forces continue to face with foreign national bulk fuel smuggling. Many other key CSS issues affecting combat operations support and logistics management are discussed throughout the remainder of the chapter.

The challenges facing units with the development of the Iraqi Civil Defense Corps (ICDC), the New Iraqi Army, the Iraqi Police Force, and the Facilities Protection Service create different demands on the CSS system.

Some divisions found it faster and easier to use the postal service to mail damaged equipment to their home station rather than use the forward repair activities in theater.

The high consumption of track and tires unexpectedly strains the wholesale system and the industrial base beyond its limits.

The improvements of laundry advanced system (LADS) over the M-85 laundry trailer are making a marked impact on troop support and water consumption in the areas of operation.

The damaging effects of a high saline content in the water table on reverse osmosis water purification unit (ROWPU) components have tasked the system for replacement components and have changed thought on where and how deep to drill for water.

Many CSS platforms equipped with the Force XXI battlefield command brigade and below (FBCB2) system have found it provides commanders and staffs real time situational awareness of logistics platform movement.

The standard army management information system (STAMIS) faces a real challenge in the austere environment of OIF. The sterilization of STAMIS and the vulnerability of the hardware along with the satellite employment of the system provide a clear look at the challenge.

There are a number of new medical/health issues that have been encountered in Iraq and Kuwait. Areas from medical unit communications to combat lifesavers to wheeled ambulance availability have been addressed.

Although challenged by new obstacles presented in OIF, logisticians of the CSS community continue to adapt exceptionally well to both the changing environment and unparalleled support requirements.

Chapter 4: Combat Service Support
Topic A: Supply the Force
Subtopic 1: Water Operations in OIF

Observation Synopsis

There are no water distribution or storage assets within brigade combat teams (BCT) other than for nuclear/biological/chemical (NBC) requirements. The MTOE for an Army of Excellence (AOE) BCT within Force XXI needs to be changed so that assets are available to distribute and hold water - the corps support group (CSG) maintains the production capability. One forward support battalion (FSB) obtained a 5K-water tanker through lateral transfer from another unit and strapped a 3K SMFT on the back of a stake and platform (S&P) trailer for distribution. However, since the FSB is not designed to provide water distribution, personnel were taken out of hide to perform the water missions – thus impacting other missions.

There were forward operating bases (FOBs) without a water source - no wells, canals, or creeks – which required water to be trucked in. Some of the FOBs have water sources nearby, but still "outside the wire." Tactical water distribution system (TWDS) was not a reliable option, as it was subject to frequent sabotage. Additional force protection was added to these sites to secure the water source.

There are numerous FOBs that did not have access to city water for nonpotable water requirements, and had to rely on reverse osmosis water purification unit (ROWPU) water for all water requirements. This was primarily because there were not enough distribution and storage assets for non-potable water. Once a water bag or semi-trailer mounted fabric tank (SMFT) is used for non-potable water, it cannot be used for potable water. Even if there was a process to refit the bags to make them suitable for potable water storage, the means to accomplish that does not exist in this austere environment. The non-potable water requirement was, on average, just as great as the potable water requirement. However, because of the risk associated with using bags for both types of bulk water, units were forced to rely solely on potable water for all bulk water requirements. Aircraft washing became a large consumer of bulk water. This would be a perfect candidate for bulk non-potable water; however, since there was no ability to store or transport non-potable water, units were forced to use large quantities of ROWPU water for these operations.

Water distribution compatibility was also an issue. The 5K SMFT can only fit on an M872 trailer, which none of the FSBs has. Only 3K SMFTs will fit on an 871 trailer; however, 3K SMFTs are in extremely short supply. In one case the CSG managed to cut and re-bind 5K SMFTs and make them into 3K SMFTs. After some trial and error, these did eventually work very well. An additional issue with compatibility was the waste incurred when using a 5K SMFT to fill a 3K bag. Because there is no way to staunch the flow from a 5K bag, 2K of water would inevitably end up dumped on the ground.

Much of the Army's water storage systems are unsuited for long-term use, and were fragile in this operating environment. Soft-skin storage (SMFTs and onion skins) did not always hold up to the environmental conditions. For example, one FOB lost its sole bulk water source when a helicopter landed in the FOB and kicked up a rock, which punched a hole in the SMFT.

The partial solution to storage and distribution lay in buying hard-sided barrel-shaped containers (approximately 450 gallons each), mounting them on a palletized load system (PLS) flatrack, and equipping them with hoses. These "camel racks" enabled the FSBs to distribute various amounts of water and have reliable storage for bulk water.

Lessons Learned

- TWDS was not a reliable option, as it was subject to frequent sabotage.
- Because of the risk associated with using bags for potable and non-potable water, units are forced to rely solely on potable water for all bulk water requirements.
- Hard-sided barrel-shaped containers (approximately 450 gallons each) mounted on a PLS flatrack and equipped with hoses enable forward support battalions (FSBs) to distribute various amounts of water and have reliable storage for bulk water.
- 5K SMFTs can only fit on an M872 trailer, which none of the FSBs has. Only 3K SMFTs will fit on an 871 trailer; however, 3K SMFTs are in extremely short supply. The CSG managed to cut and re-bind 5K SMFTs and make them into 3K SMFTs.
- Water waste occured when using a 5K SMFT to fill a 3K bag. Since there is no way to staunch the flow from a 5K bag, 2K of water would end up on the ground.
- Much of the Army's water storage systems are unsuited for long-term use and become fragile in an arid desert operating environment. Soft-skin storage (SMFTs and onion skins) did not always hold up to the environmental conditions.
- It is extremely difficult for the CSG to coordinate, obtain, and maintain water assets and personnel in theater for the BCT.
- SMFTs (3K and 5K) have limited use. Once water off-load is initiated, for safety reasons, the truck cannot move until the bag is totally empty. Many containers hold less than the 3K or 5K. If 5K or 10K bags are unavailable, the SMFT ends up being a storage bag instead of being utilized to transport water.
- Personnel and assets must be added to the FSB MTOE to support water distribution for the BCT.

DOTMLPF Implications

Materiel: Recommend the FSB have, at a minimum, four 5K-water tankers and eight personnel to support the brigade for potable water or provide each battalion with two heavy expanded mobility tactical truck (HEMMT) tankers that are modified to be utilized for water distribution. Also recommend each battalion within the BCT be provided two 10K water bags for holding capacity.

Material and Organization: Purchase hard-sided barrel-shaped containers (approx 450 gallons each), mount them on a PLS flatrack, and equip them with hoses. These "camel racks" will enable the FSBs to distribute various amounts of water and have reliable storage for bulk water.

The "Camel Rack" Non-Standard Water Delivery System.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Water Operations from the DISCOM Perspective	10000-01288

Chapter 4: Combat Service Support
Topic A: Supply the Force
Subtopic 2: End of Fiscal Year Mass Cancellations in OIF

Observation Synopsis

In the last days of FY03, Coalition Forces Land Component Command (CFLCC)/Coalition Joint Task Force (CJTF) directed the mass cancellation of all backordered OIF customer requisitions with dates earlier than 1 August 2003. Major subordinate commands (MSCs) across theater were not properly informed, since CFLCC had rescinded a fragmentary order (FRAGO) that directed the MSCs to execute the mass cancellations. Instead, United States Army, Europe (USAREUR) logistics automation division (LAD) developed a standard Army retail supply system (SARSS) script to input customer requests for cancellation (AC1) at the SARSS-2AC level. The script successfully generated AC1s for all customer requisitions, thus canceling the customer requirement (RON) at the SARSS-1. However, this action did not cancel the rollover document (DON) for many of the RON/DON logic requisitions in the system. Routinely, when a RON/DON logic requisition is canceled and the DON arrives, if there's no longer a requirement, SARSS will excess the part out. This generated a large amount of serviceable excess at the supply support activity (SSA) level as rollover document parts (DON) began to arrive without a requirement (customer due-out) at the SSA.

Lessons Learned

- Units in contingency operations should not be subject to this type of funds control or de-obligation of funds to recuperate monies prior to end of fiscal year closeout.

- Since the wholesale and theater systems are already unable to get a backordered part or item to customers in no less than 30-35 days, this procedure is ill-conceived.

DOTMLPF Implications

Doctrine: Units in contingency operations should be exempt from de-obligation of funds to recuperate monies prior to end of fiscal year closeout.

Table of Supporting Observations:

Observation Title	CALLCOMS File Number
End of Fiscal Year Mass Cancellations During OIF	10000-75460

Chapter 4: Combat Service Support
Topic A: Supply the Force
Subtopic 3: Use of Class IX Expeditors

Observation Synopsis

When one division deployed to Iraq, it entered a theater with an immature distribution system. This resulted in large quantities of class (CL) IX (replacement and repair parts) being "frustrated" or mis-shipped. CL IX personnel were placed at critical nodes in the theater distribution system to reduce these numbers. As the theater distribution system has matured, the need for these expeditors has been reduced, but not completely eliminated. CL IX expeditors continue to play a vital role in the delivery of CL IX in the Iraqi theater of operations. The division placed CL IX personnel at several locations to include the Camp at Arifjan, Kuwait; Doha, Kuwait; logistics support area (LSA) Anaconda, and at the central receiving point/logistics re-supply point (CRP/LRP) at Baghdad International Airport (BIAP). Personnel at LSA Anaconda and BIAP were responsible for ensuring CL IX parts were placed into lanes for delivery. They also ensured the division's parts were not held up in frustrated cargo areas. In addition, these personnel coordinated and walked through CL IX requisitions at echelons above division (EAD) SSA operating in their areas. This has become increasingly important for personnel at LSA Anaconda since this site has been selected as an enduring base camp and additional SSAs have chosen to locate there. Personnel in Kuwait were responsible for ensuring parts were placed into the division's lanes at the theater distribution center (TDC). They were also charged with the mission of obtaining parts by walkthrough procedures from the GS warehouse located in Arifjan.

Lessons Learned

- CL IX personnel placed at critical nodes in the theater distribution system to reduce frustrated or mis-shipped cargo facilitates the flow of repair parts. Recommend four personnel to be placed at Arifjan, Kuwait; two personnel to be placed at LSA Anaconda; and two personnel to be placed at the CRP at BIAP.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Use of CL IX Expeditors	10001-44228

Chapter 4: Combat Service Support
Topic A: Supply the Force
Subtopic 4: Supply Support Activity (SSA) Support in OIF

Observation Synopsis

While in Iraqi theater, one division used extremely large quantities of CL IX. On an average month, the division submitted over 180,000 customer CL IX requisitions. This increase in CL IX flow has forced SSA to work longer periods to keep up with the increased workload. This, combined with increased personnel requirements for force protection and other work details, has pushed SSAs to their limit. In addition, the division no longer has the civilian augmentees it had in Central Region. This has forced the division to look at courses of action to reduce the backlog developed at all SSAs, especially the main support battalion (MSB). In order to rectify this situation, the division submitted requests for civilian SSA augmentees through the Army's LOGCAP program, which is still pending at this time. The civilian augmentees should be contracted personnel already trained in SSA operations. The pace of operations at SSAs severely limits the amount of time that can be dedicated to training new personnel on operations. In addition, there are force protection and security requirements associated with using host nation personnel to conduct this function. Iraqi personnel employed in an SSA would need to be constantly monitored by military personnel.

Lessons Learned

- An increase in CL IX flow has forced SSAs to work longer periods to keep up with the increased workload.

DOTMLPF Implications

Organization: Follow-on forces submit requests for civilian augmentation or request continuation of any existing contracts.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
SSA Support in OIF	10000-05967

Chapter 4: Combat Service Support
Topic A: Supply the Force
Subtopic 5: Providing Bulk Fuel to the Iraqi Civilian Population

Observation Synopsis

Coalition Forces (CF) have been working hard to create a management approach to bulk fuel intended for foreign national use. Prior to CF operations in theater, Iraqi bulk fuel assets were managed with a centralized style, having all decision and direction provided from the Ministry of Oil (MO) located in Baghdad. It provided local operation managers one source that all could blame, and it was the standard practice to blame all shortages, errors, and mismanagement on the MO. Since CF assumed oversight and a shared local management, a decentralized approach to fuel assets has proven far more successful. Decisions are made independently by local Iraqi fuel managers, forcing greater assumption of responsibility. Project development is emerging and future operations are a greater consideration in their decision-making process. As Iraqi managerial autonomy emerges, foreign national backsliding into former operational management style is of great concern.

Tracking of bulk fuel from Iraqi refineries and distribution companies is a difficult challenge due to inadequate tracking mechanisms and extensive smuggling conducted by organized crime. Since coalition forces have taken control of Iraqi infrastructure, refined petroleum-based products have been restricted from export. Iraqi drivers are diverting mass quantities of refined products such as benzene, kerosene, and diesel to Iran and surrounding countries. The primary means of illegal export are the road tanker, converted pick-up trucks, buses, fishing boats, and small barges which can easily slip through border patrols. Once across the border, traffickers transfer the fuel products to middle-men who sell the products making a profit increase five times the original price. In other cases, falsified documentation is produced which allows traffickers to justify the "loss."

Lessons Learned

- Since Coalition Forces have assumed oversight of bulk fuel provided to the civilian population from the MO, a more decentralized management style has emerged and has successfully encouraged more assumption of responsibility by local managers.

- As management autonomy by Iraqi nationals emerges, a return to the familiarity of a centralized approach is of concern.

- Coalition forces have limited capability to track the illegal trafficking of large quantities of fuel across the borders of Iraq.

- Most escorted convoys are making deliveries without any problem or corruption. Unescorted convoys are a risk for smuggling activities and illegal sell of fuel to private gas stations.

- Continue bulk fuel management oversight, ensuring successful decentralized approach.

DOTMLPF Implications

Doctrine: An improved system to track every fuel movement from refineries to distribution centers needs to be developed. The tracking system should not interfere with eventual Iraqi management. Manifest documentation needs an improved validation process to prevent falsification.

Iraqi Bulk Fuel Tankers at a distribution point

Confiscated Iraqi Tankers used for fuel smuggling

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Providing Bulk Fuel to the Iraqi Civilian Population	10001-64835
Civilian Iraqi Bulk Fuel Management from a Coalition Perspective	10000-05841

Chapter 4: Combat Service Support
Topic B: Maintain the Force
Subtopic 1: Small Arms Support of Local Militia and Police Forces

Observation Synopsis

CSS commanders are authorized to maintain, as bench stock, a limited amount of parts from captured and abandoned Iraqi AK-47 weapons. This poses several issues for accountability and control. The first issue is tracking functional weapons entering small arms shops. Once inner mechanisms are removed, the weapon is no longer functional, however, the parts must now be accounted for. Enforcing Army policy that all small arms bench stock is double-locked, and that it is not possible to build a complete weapon from bench stock becomes an issue. Working knowledge of non-NATO/U.S. weaponry for the small arms repairers (MOS 45B) and the armament technicians (MOS 913A) is limited. At a minimum, these individuals need to have a basic knowledge of AK-47s. The expansion and development of programs providing support to foreign nationals - Iraqi Civil Defense Corps (ICDC), the New Iraqi Army (NIA), the Iraqi Police Force (IPS), and the Facilities Protection Service (FPS) necessitates the addition to armorer MOS (military occupational specialty) training. As operations in theater continue, the most likely non-NATO/U.S. weapon available will be the AK-47.

Lessons Learned

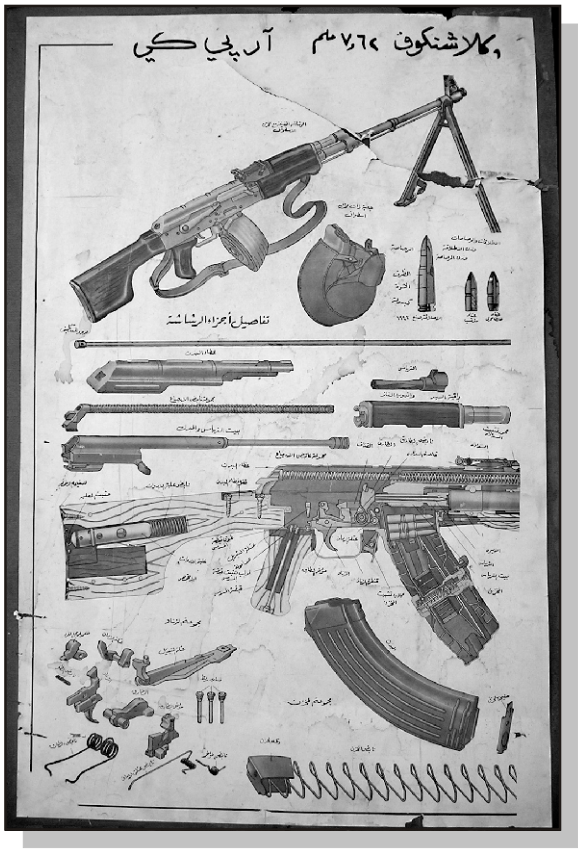
- Commanders are authorized to maintain a limited amount of AK-47 parts to be used as bench stock.
- Working knowledge of non-NATO/U.S. weaponry for the small arms repairers and the armament technicians is limited.

DOTMLPF Implications

Training: Expand the 45B and 913A MOS to include instruction and knowledge base development by including non-NATO weaponry training. Unit armorers will be able to provide support to foreign nationals - ICDC, NIA, IPS, and FPS.

Materiel: Army materiel command (AMC) authorize purchase of replacement parts for Soviet/non-NATO weapons.

Captured Iraqi Weapons



Captured Weapons Diagram

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Small Arms Support of Local Militia and Police Forces	10000-24590

Chapter 4: Combat Service Support
Topic B: Maintain the Force
Subtopic 2: Forward Repair Activities in OIF

Observation Synopsis

There were only two forward repair activities (FRAs) available to one division: one in Arifjan, Kuwait, and a new one in Balad, Iraq, after 22 September 03. There was not a good method to transport broken equipment from the division area to the FRAs, and the forward FRA did not have enough parts to make timely repairs. The Balad FRA could direct exchange (DX) a very limited amount of equipment and took two to three weeks or more to repair a computer or printer. The division found it faster and easier to use the military postal service (MPS) to mail equipment to home station and have them DX it than to use the FRA. The division frequently would take a computer from BIAP to Balad, only to discover the FRA had to evacuate it through BIAP to the Continental United States (CONUS) or Germany for repair. Had there been an FRA at BIAP it would have been centrally located for the division and other major units. It would also have been one step closer to its own source of supply parts.

Lessons Learned

- FRAs are not adequately stocked to make timely repairs to all equipment.
- FRAs must be located at multiple central points within theater where CSSAMOs can access them easily, and obtain parts. Major airports along the supply routes are best suited for this function.
- Units have found it faster and easier to use the Military Postal Service (MPS) to mail equipment to home station and have them DX it than to use the FRA.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Forward Repair Activities in OIF	10000-85466

Chapter 4: Combat Service Support
Topic B: Maintain the Force
Subtopic 3: Retrograde of Equipment in OIF

Observation Synopsis

The increased consumption of CL IX by divisions and other units operating in theater has placed increased burdens on the wholesale supply system. Of particular significance are major assemblies and line replaceable units (LRUs) that require repair at depot level and are critically short in the wholesale system. It is therefore critical that units quickly return unserviceable CL IX repairables to the wholesale supply system.

Lessons Learned

- Units need to develop, implement, and strictly enforce a CL IX unserviceable and serviceable retrograde plan.
- Unit's plan needs to ensure exchange items are returned to the appropriate site for repair.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Retrograde of Equipment in OIF	10000-37271

Chapter 4: Combat Service Support
Topic B: Maintain the Force
Subtopic 4: Track and Tire Consumption in OIF

Observation Synopsis

While operating in Iraq, many divisions consumed track and tires at a much higher rate than was originally expected. In six months, one division replaced almost every track shoe on its entire M1 and M2 fleets. Other tracked systems have had increased track consumption as well. A number of factors influenced this increased consumption to include a high operations tempo and extreme summer temperatures. In some cases, track pads wore out fewer than 60 days after they were installed. This high consumption of track and tires has strained the wholesale system and the industrial base beyond its limits. At one point, one division's M3 fleet was at 39 per cent due to the number of systems deadlined for track alone. The problem was escalated by units deploying with worn, substandard track and tires.

Lessons Learned

- Units deploying to the Iraqi theater replace worn-out track and tires prior to deploying to the theater of operations.

- It is imperative units begin ordering track 05 (anticipated deadline) before the system becomes non-mission capable (NMC). This will ensure requisitions are in the system before systems are deadlined and will help preserve the readiness of the fleets.

DOTMLPF Implications

Materiel: AMC should support increased track and tire demands for deploying units and allow them to bring as much track as they can reasonably transport and adjust authorized stockage list (ASL) requisitioning objectives (ROs) and reorder points (ROPs) to account for increased track consumption.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Track and Tire Consumption in OIF	10000-54417

Chapter 4: Combat Service Support
Topic B: Maintain the Force
Subtopic 5: Materiel Handling Equipment (MHE) Maintenance in OIF

Observation Synopsis

Materiel handling equipment (MHE) readiness was a constant challenge for one division since its arrival in Iraq. Constant usage and harsh desert operating conditions made maintenance difficult. The 6K variable reach forklift was an especially challenging fleet with operational readiness (OR) rates falling as low as 37 per cent. Obtaining CL IX for these systems was difficult because they are low density and funds are limited at wholesale. Estimated shipping dates (ESDs) for some MHE major assemblies have been six months or longer.

Lessons Learned

- Because it is difficult to obtain CL IX for MHE and because these systems are critical to the logistics mission, it is essential units implement an effective preventive maintenance program. An essential element of this program must be operator-level training.

- A significant number of vehicle faults could have been prevented if personnel had been properly trained and licensed on procedures for operating and maintaining MHE.

- Deploying units should enforce rigorous maintenance standards for MHE fleets and ensure operators are properly trained and licensed on these systems.

DOTMLPF Implications

Materiel: Recommend Army materiel command (AMC) support and units bring a healthy stock of MHE CL IX to support their systems. High failure parts include flywheels, starters, fuel pumps, and engines for 6K forklifts.

Heavy demand on support equipment.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Materiel Handling Equipment (MHE) Maintenance in OIF	10000-19140

Chapter 4: Combat Service Support
Topic C: Sustain the Force
Subtopic 1: Additional Forward Support Battalion (FSB) MTOE Equipment Requirements in OIF

Observation Synopsis

During initial operations in OIF, BCT forward support battalions (FSBs) identified the requirement for four additional heavy equipment transports (HET), one rough terrain cargo handler (RTCH), one or more mortuary affairs refrigerated storage units, and one or more reverse osmosis water purification unit (ROWPU)/tactical water delivery system (TWDS) teams. Upon deployment, one FSB was permanently augmented with a ROWPU/TWDS team from the supporting corps unit. The water production and distribution teams were, however, moved to other corps assets which caused serious disruption in service and operational continuity. The division ultimately augmented the FSB with its own HETs after several months of scheduled but unfilled support mission requirements. One RTCH was also supplied by the corps on a temporary basis. Despite numerous attempts to obtain a Mortuary Affairs refrigerated storage unit through normal Army supply channels, the FSB was unsuccessful and turned to the local civilian sector for support. The FSB should be authorized this equipment as MTOE in order to avoid these pitfalls and maximize its ability to provide efficient support to the BCT.

Lessons Learned

- Although Force XXI has eliminated the authorization of ROWPU and water distribution assets, FSBs are still tasked with the responsibility to produce and deliver water within the brigade.

- Although the FSB is tasked with the responsibility to provide mortuary affairs assets to the brigade, FSBs are not authorized reefer vans or refrigerated storage containers for deceased Soldiers.

- The FSB identified the need for permanent MTOE addition of HETs, RTCH, and ROWPU/TWDS assets.

DOTMLPF Implications

Materiel and Organization: Authorize FSBs additional equipment on MTOE that was originally authorized prior to Force XXI logistics realignment.

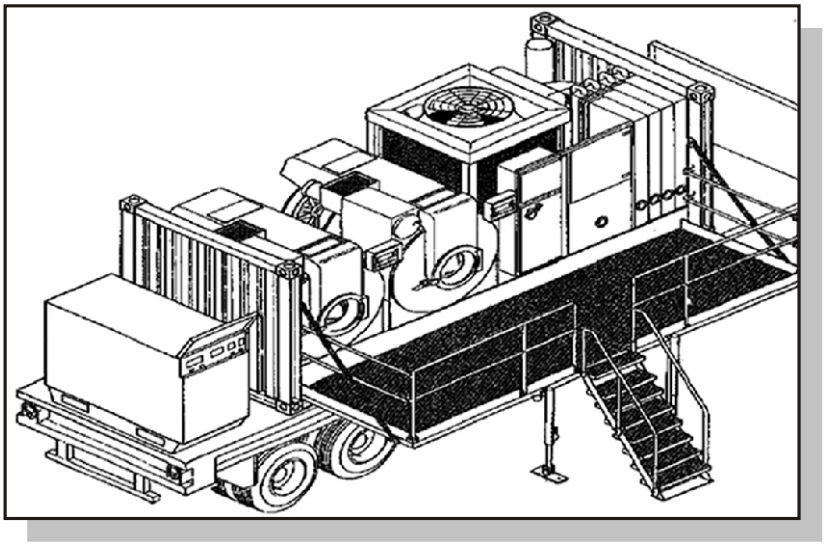
Table of Supporting Observations

Observation Title	CALLCOMS File Number
Additional FSB MTOE Equipment Requirements in OIF	10000-90160

Chapter 4: Combat Service Support
Topic C: Sustain the Force
Subtopic 2: Laundry Advanced System (LADS) Improvements over M-85 Laundry Trailer

Observation Synopsis

Although the fielding of the laundry advanced system (LADS) has had its technical difficulties, it still remains a vast improvement over its predecessor, the M-85 laundry trailer. The disadvantage of the M-85 laundry trailer was the enormous water consumption requirement. A LADS, through a distillation process, recycles water and creates less overall consumption. If both are working at their maximum capacity, LADS uses one-third the amount of water required by the M-85. The capability of LADS has increased laundry service capacity to support 3,500 Soldiers, or a brigade-size element, a two-thirds increase over the M-85. LADS is a highly engineered system, making maintenance at the user-level increasingly difficult for the average 92S MOS Soldier. Although the fielding of LADS has had minor technical difficulties at the user-level, it still remains a vast improvement over the M-85 laundry trailer.



Laundry Advanced System (LADS) Graphic.

Lessons Learned

- LADS uses one-third the amount of water required by the M-85, a major advantage over the old system.
- The capability of LADS has increased laundry service capacity to support 3,500 Soldiers, or a brigade-size element, a two-thirds increase over the M-85.

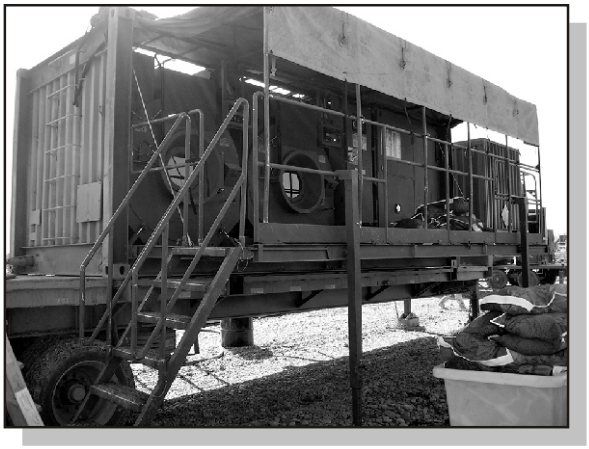
- LADS is a highly engineered system, making maintenance at the user-level increasingly difficult for the average 92S MOS Solider.

DOTMLPF Implications

Materiel and Organization: Field more LADS at the brigade level.

Training: Recommend more user-maintenance instruction provided to 92S MOS Soldiers during advanced individual training (AIT).

M-85 Laundry Trailer



Laundry Advanced System (LADS)

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Laundry Advanced System (LADS) Improvements over M-85 Laundry Trailer	10000-14544

Chapter 4: Combat Service Support
Topic C: Sustain the Force
Subtopic 3: Effects of High Saline Content in the Water Table on ROWPU Components

Observation Synopsis

During initial operations near BaQubah in the Diyalah Region, drilling operations were required for water resourcing. Water was pulled from fewer than 30 meters below ground surface. Within weeks of continuous operation, the extreme saline content of the water began to degrade production of purified water. Patches of a white powdery substance was evident on the ground surface in the surrounding drilling area. Cartridge filters were being replaced on a daily basis, and a white corrosion and rust build-up were beginning to affect the basket strainers, welding seams, threaded joints, and small connections and fittings; the backwash airline pipes needed to be replaced. Further examination revealed the manufacturer had integrated stainless steel parts with non-stainless steel parts. This began to have a lateral effect on stainless parts due to extreme rust and corrosion build-up on the non-stainless steel parts. Eventually, a surface water resource was located, and ROWPU operations were moved and re-established. Below-surface depth guidance for future water drilling was determined not to be fewer than 300 feet in certain regions to reduce saline content.

Lessons Learned

- Water pulled from fewer than 30 meters in some parts of the Diyalah Region of Iraq has an excessive concentration of saline.

- Extreme saline content of the water degraded production of purified water and damaged component parts of the ROWPU.

DOTMLPF Implications

Doctrine: When conducting below-surface water collection operations, drilling should not be fewer than 300 feet below the surface in high saline areas.

Materiel: All component parts in the ROWPU should be either stainless steel or PVC material. Non-stainless steel should not be authorized.

Examples of corrosive effects from extreme saline content on ROWPU parts.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Effects of High Saline Content in the Water table on ROWPU Components	10000-07865

Chapter 4: Combat Service Support
Topic D: CSS Command, Control, Communications, and Intelligence (C3I)
Subtopic 1: Intelligence Collection for CSS Force Structure

Observation Synopsis

There lacks a common operating picture (COP) for intelligence collection across the spectrum of major subordinate commands (MSC) due to limited access to CSS structure for battle analysis. CSS structure requires access to Force XXI battlefield command brigade and below (FBCB2)/Blue Force Tracker to provide adequate understanding of the current battlefield operations and CSS requirements. There is no central collection agency for intelligence data and overarching analysis of the threat, which can ultimately leave CSS units without adequate intelligance during operations.

Lessons Learned

- There is no central collection agency for intelligence data overarching analysis of the threat for CSS MSCs.
- All elements of the CSS force structure requires access to FBCB2/Blue Force Tracker to provide adequate understanding of the current battlefield operations and future CSS requirements.

DOTMLPF Implications

Materiel: Design infrustructure to support access to FBCB2/Blue Force Tracker, providing an understanding of current battlefield operations and future CSS requirements.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Insufficient Intelligence Collection for CSS Force Structure	10000-43056

Chapter 4: Combat Service Support
Topic D: CSS C3I
Subtopic 2: Long-Range Communications for CSS Force Structure

Observation Synopsis

There is no long-range communications capability in the CSS structure. Mobile subscriber equipment (MSE) is outdated and cannot handle communication traffic requirements. Defense transportation reporting and control system (DTRACS) and mobile tracking system (MTS) lack compatiblity, and lack of DTRACS flyaway kits limits use and interoperability of the DTRACS system.

Lessons Learned

- Long-range communications capability for CSS operations is non-existent.
- DTRACS and MTS lack compatibility, and lack of DTRACS flyaway kits limits use and interoperability of the DTRACS system.

DOTMLPF Implications

Doctrine: Overhaul MSE network to improve bandwidth and communications capability, which is currently outdated technology and cannot handle bandwidth demand. Standardize MTS as the Army's single movement tracking system, and eliminate DTRACS. Expand MTS messaging capability.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Non-Existent Long-Range Communications for CSS Force Structure	10000-40755

Chapter 4: Combat Service Support
Topic D: CSS C3I
Subtopic 3: Range Capability of Force XXI Battle Command Brigade and Below System (FBCB2) to Support the CSS Force Structure

Observation Synopsis

CSS elements of the BCT often are required to travel extended distances outside of the BCT and, in some cases, the division AOR in order to move supplies or personnel. A majority of the CSS platforms are equipped with the FBCB2 system. The FBCB2 system provides CSS commanders and staffs real time situational awareness of logistics platform movement anywhere within the range of the system or supporting enhanced position location receiver system (EPLRS) network. The system also provides a redundant means of communications from the platform to neighboring platforms, units, or owning headquarters with a free text messaging or preformatted reports capability. The limitations to the system are that of the range of the supporting EPLRS networks. CSS units are routinely required to travel beyond the range of the supporting EPLRS networks to execute logistics missions. Once beyond EPLRS range, situational awareness is lost, the CSS unit is beyond FM communications range of its headquarters, and on its own during movement. The Blue Force Tracker, a similar system to the FBCB2, provides the situational awareness range extension required of CSS units when forced to travel/operate outside of the division AOR.

Lessons Learned

- The EPLRS network, in support of the lower tactical internet and FBCB2 system, is not designed to provide the adequate range extension required for CSS units to maintain continuous situational awareness when executing operations throughout a non-linear battlefield.

- Blue Force Tracker provides the situational awareness range extension required of CSS units when operating outside the division AOR.

- The satellite-based connectivity utilized by the system is not limited by range. The system unfortunately lacks a secure means of exchanging message traffic and does not provide real-time updates to unit location. CSS units could benefit from a hybrid of these two systems with the real time situational awareness and C2 messaging capability of the FBCB2 combined with the satellite-based range extension afforded by the Blue Force Tracker.

DOTMLPF Implications

Materiel: Design infrustructure to support access to FBCB2/Blue Force Tracker, providing an understanding of current battlefield operations and future CSS requirements.

Force XXI Battlefield Command Brigade and Below

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Insufficient Range Capability of FBCB2 to support the CSS Force Structure	10000-29668

Chapter 4: Combat Service Support
Topic D: CSS C3I
Subtopic 4: Communication Challenges in the Logistics Community in OIF

Observation Synopsis

The logistics community has developed a number of sophisticated web-based tools that can be leveraged to track and manage CL IX and other supplies moving through the wholesale and distribution systems to the user. These tools have become the standard and are used every day to manage CL IX operations. Some of these tools include: WEBVLIPS, WEBCATS, JTAV, JLWI, and a host of other systems. However, sufficient communications architecture is necessary to effectively utilize these systems. At the current time, the division signal community does not have the assets necessary to support these functions. One division worked around this issue by "piggy-backing" off the mini- and micro-communications packages contracted by AMC. However, this forces reliance on an external organization in order to accomplish its mission. The same division also utilized some of the excess capability built into the very small aperture terminal (VSAT) system to gain access to some of these tools. However, many of the web tools used to manage CL IX are not accessible through VSATS.

Lessons Learned

- The division signal community does not have the assets necessary to support WEBVLIPS, WEBCATS, JTAV, JLWI, and a host of other systems.
- Units have worked around this issue by "piggy-backing" off the mini- and micro-communications packages contracted by AMC.
- Some units have utilized part of the excess capability built into the VSAT system to gain access to some on-line tools.
- Many web tools used to manage CL IX are not accessible through the VSAT system.

DOTMLPF Implications

Organization and Materiel: Units must have access to communications systems that can support their information requirements. Access to high-speed internet connections and DSN lines is essential to mission accomplishment. Future units should consider contracting for these essential systems. Recommend units obtain a contract similar to the one used by AMC to support their communications requirements.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Communication Challenges in the Logistics Community during OIF	10000-75602

Chapter 4: Combat Service Support
Topic D: CSS C3I
Subtopic 5: Importance of Information Management for Coalition Transporters

Observation Synopsis

During initial operations at Multi-National Division, South East (MND SE), information concerning details of movement within the theater was a challenge upon initial arrival in theater. Information within various commands of U.S. forces was degraded by system compartmentalization. Connectivity and interoperability of systems limited shared information related to movement tracking. J4-Movements within the Multi-National Joint Logistics Center (MJLC) identified points of contact within major units to facilitate improved information management. A movement liaison team was requested through TF HQ, and a cell at UmmQasr was identified to observe cross-loading of cargo. At each of the locations, knowledge of the movement architecture was essential with embedded liaison officers (LNO). In the end, identifying key transportation personnel providing information linkage at Navistar (Kuwait), CSC Cedar II, CSC Scania, and Baghdad was the key to successfully tracking movements in theater.

Lessons Learned

- The future is in multinational operations. Future commanders must ensure tracking of all movement operations must have asset visibility.
- Asset visibility can be best achieved through interoperable communications systems (data and voice).
- Short of utilizing interoperable communications systems which all coalition forces have access to, is to establish relationships early in operations ensuring passage of vital information.

DOTMLPF Implication

Organization and Doctrine: Recommend fielding of a movement tracking system which all coalition forces have access to at the MJLC.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Importance of Information Management for Coalition Transporters	10001-05952

Chapter 4: Combat Service Support
Topic E: CSS Standard Army Management Information System (STAMIS)
Subtopic 1: Sterilization of STAMIS Standard Army Retail Supply System Boxes

Observation Synopsis

One of the benefits upon conversion to single stock fund (SSF) is the ability of a division to do a complete disconnect from home-station corps/theater automatic data processing (ADP) service center (CTASC) and reconnect to deployment CTASC. This would allow units to keep their home-station Department of Defense activity address codes (DODAAC), and keep their standard Army retail supply system (SARSS) boxes up-to-date, including current due-ins and due-outs. Coalition Forces Land Component Command (CFLCC) and United States Army Forces Command (FORSCOM) determined it was unfeasible for the financial community to track funds through the disconnect/reconnect process, and instructed units to conduct a complete sterilization of SARSS boxes. This placed a greater work requirement on the division, especially since this was the first time a division-size element had conducted a complete sterilization of its SARSS boxes. The process took over two months to complete. The procedures provided to divisions were inadequate, and assistance from the Army community outside the corps was not available or accessible. Additionally, the time spent to complete this conversion distracted divisions from the assigned task of prepping to deploy and sustain itself in the first 60 days of deployment. It also caused one division to stop requisitioning needed ASL replenishment repair parts during the time period.

During the pre-deployment phase, when not using the preferred method of "disconnect/reconnect," units must obtain a copy of a sterile load for both the SARSS-1 and SARSS-2A from Fort Lee. Units must also coordinate with the gaining CTASC and losing CTASC for all file transfers between the two CTASCs. The losing CTASC and the deploying SARSS-2A and SARSS-1s must be zeroed out of all due-ins and the gaining CTASC will accept the files only after they have been effectively zeroed out. The gaining CTASC will then have the gaining SARSS-1 run a close-out process to re-establish the due-ins on the gaining CTASC.

The SARRS-2A has no ASL; it is the management box for all division SARSS-1s. During the sterilization process of the SARSS-2A, all parameters must be loaded with the gaining CTASC's parameter set. At this time all processes are manual at the SARSS-2A. All DODAACs, unit identification codes (UICs), and parameters must be loaded manually. When building sterile boxes, units must use the deployment DODAACs and home station UICs (if 50 % or more of the unit is deployed). The division property book officer (PBO) requests, obtains, and verifies all deployment DODAACs and rear detachment derivative UICs.

Lessons Learned

- Complete sterilization of SARSS boxes versus the "disconnect/reconnect" method is a lengthy process at the division level.

- During the pre-deployment phase, when not using the preferred method of "disconnect/reconnect," units must obtain a copy of a sterile load for both the SARSS-1 and SARSS-2A from Fort Lee.

- During the sterilization process of the SARSS-2A, all parameters must be loaded with the gaining CTASC's parameters set.

- For future deployment of brigade-size or higher elements, SARSS "disconnect/reconnect" should be performed, and a unit that deploys with more than half of its force should continue to maintain its DODAAC versus acquiring deployment DODAACs.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Sterilization of STAMIS (SARSS) Boxes	10001-29593

Chapter 4: Combat Service Support
Topic E: CSS STAMIS
Subtopic 2: Hardware Repair Parts

Observation Synopsis

Hardware repair for STAMIS computers is normally performed by the Tobyhanna FRA. The CSS automation management office (CSSAMO) is not authorized to open any STAMIS computers due to the Tobyhanna contract. CSSAMO is only authorized to perform software repair and trouble-shooting, and to provide STAMIS computer exchange systems to units that would otherwise require only rudimentary hardware replacement (specifically A drives). This is not only inefficient in regards to time, but it requires CSSAMO to haul many "float" systems around the battlefield.

Lessons Learned

- CSSAMO is not authorized to open any STAMIS computers due to the Tobyhanna contract.
- CSSAMO is only authorized to perform software repair and troubleshooting, and to provide STAMIS computer exchange systems to units that would otherwise require only rudimentary hardware replacement.

DOTMLPF Implications

Doctrine and Materiel: CSSAMO should be authorized to purchase and install replacement parts into STAMIS computers.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Hardware Repair Parts	10000-13555

Chapter 4: Combat Service Support
Topic E: CSS STAMIS
Subtopic 3: Standard Army Management Information System (STAMIS) Hardware Vulnerability

Observation Synopsis

Program Manager (PM) issued STAMIS equipment is almost universally commercial off-the-shelf (COTS) hardware designed by civilians to be used in an office or home environment. The only STAMIS exception to this is the mobile tracking system (MTS). These systems are not compatible with the harsh environment that Army units subject them to. The unit-level logistics system (ULLS) computers that the National Training Center issues to rotational units are "ruggedized" laptops which are subjected to harsh environments for a month at a time every two months, yet continue to provide reliable service. MTS is not reliable in an austere desert environment since it has to be upgraded too often and is subject to damage. Although MTS provides communications capability across huge distances, MTS lacks adequate durability. Additionally, the instant messaging feature of MTS should be expanded to allow more characters per message.

Lessons Learned

- MTS mobile systems are not compatible with the harsh environment that Army units subject them to.
- ULLS computers the National Training Center issues to rotational units are "ruggedized" laptops which are subjected to harsh environments for long periods yet continue to provide reliable service.

DOTMLPF Implications

Materiel: All STAMIS provided from the PM should be ruggedized laptops. MTS antennas should be made rugged enough to withstand cross-country travel in harsh environments.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Vulnerable STAMIS Hardware	10001-16899

Chapter 4: Combat Service Support
Topic E: CSS STAMIS
Subtopic 4: Standard Army Management Information System (STAMIS) Very Small Aperture Terminal (VSAT) Satellite Network in OIF

Observation Synopsis

Normally, divisions train and plan to use corps and divisional signal assets mobile subscriber equipment (MSE) to provide connectivity from brigade support areas (BSA) to the division support area (DSA) and higher. Support battalions simply plug into this network and STAMIS traffic from ULLS, standard Army maintenance system (SAMS), and SARSS flows over it, managed by the signal network operations center. For most support battalions in OIF, the CFLCC C4 procured ground stations for log-automation, CSSAMO controlled, VSAT satellite networks. This worked extremely well for STAMIS traffic for the units that had it. It worked so well for providing NIPRNET connectivity, compared to the MSE network, that many units used it for unclassified command and control traffic as well as for morale-welfare-recreational (MWR) connections. However, the system did not cover every SSA and was separated and fire-walled from the rest of the tactical NIPRNET, making direct communications between MSE NIPRNET and VSAT NIPRNET very difficult. Managing the network was also challenging to the CSSAMO and support battalion personnel, who had never trained with it.

Lessons Learned

- VSAT satellite network works extremely well for STAMIS traffic.
- In a theater of operations where the wholesale and theater systems are already unable to get a backordered part or item to customers in no less than 30-35 days, this procedure is ill-conceived.
- CSSAMO and support battalion personnel are not properly trained to manage MSE NIPRNET and VSAT NIPRNET systems.

DOTMLPF Implications

Materiel: Provide VSATs to divisional and corps signal units (instead of support units) as additional bandwidth providers. Signal units have personnel trained in controlling and managing the systems and could use them in addition to normal MSE assets to provide redundant and complimentary routes from system to system. G-6s could then plan to provide adequate assets to every unit, support battalions included, and keep all units on the same networks.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
STAMIS VSAT Satellite Network in OIF	10000-42998

Chapter 4: Combat Service Support
Topic E: CSS STAMIS
Subtopic 5: DODAAC/UIC and MMC Changeover for Deployment

Observation Synopsis

Deploying units had to change from their home station DODAACs and UICs to separate ones for OIF. Many units also had to conduct a disconnect/reconnect to shift from their home station materiel management center (MMC) to a theater one. This caused many configuration problems and a lot of STAMIS down time from unit level logistics system (ULLS) users on up. However, the process did effectively isolate deployment-related costs and supply issues from home station issues and it does facilitate follow-on relief-in-place operations.

Lessons Learned

- Many units had to disconnect/reconnect to shift from home station MMC to a theater MMC, which caused many configuration problems.
- Identify, develop, and distribute tasks such as "Migrate to Wartime DODAAC" to battalion S4 and motor section METLs and "Transition to Wartime MMC" to division and corps logistics unit METLs.
- Train during major unit training events such as BDE field training exercises (FTXs), division and corps WARFIGHTERs, and rotations at the CTCs to transition to "wartime" DODAACs/UICs.

DOTMLPF Implications

Doctrine and Organization: Publish the separate DODAACs/UICs and combatant command MMCs as the deployment standard.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
DODAAC/UIC and MMC Changeover for Deployment	10000-79764

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 1: Class VIII Medical Re-Supply

Observation Synopsis

Initially noted was the inability to get CL VIII delivered and distributed in a reasonable period of time. This was especially true with medications. The trauma chests and supplies that the unit deployed with were sufficient for the initial drive, even though this unit deployed into the area of operations relatively late. After establishing the current forward operating base (FOB), the trauma chests were clearly inadequate for providing sick call because they lack an appropriate selection and/or supply of prescription and non-prescription medications. This required the battalion surgeons and/or physician assistants to 'scrounge' medical supplies from adjacent units as well as the local slice of the combat support hospital to provide adequate level I and level II care at their respective FOBs. It took several months before the medications ordered started trickling in at a regular pace.

Lessons Learned

- Do not expect ready supply of prescription and non-prescription medications to be available during the first few weeks to months of deployment.
- Trauma chests are not sufficient to supply needs of routine sick call patients.
- Battalion aid stations should not only deploy with the initial medical supplies, but also with a full chest or two containing a wide selection of prescription and non-prescription medications. These supplies should be sufficient for at least one, but preferably three months operation to allow the medical supply system to ramp up distribution to units in the field.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Class VIII Medical Re-Supply	10000-03182

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 2: Medical Logistics Personnel

Observation Synopsis

Ordering of CL VIII and its distribution is highly dependent on the medical supply section in the forward support battalion's medical company. A very competent and diligent section is needed to not only place orders for supplies, but also to track their status, arrival, and distribution. A weak section and/or perceived unreliability of the section resulted in supported units bypassing the medical company with their CL VIII orders and ordering directly from the division medical supply office (DMSO). This direct ordering was permitted by the DMSO because they recognized the problem that was not being fixed or addressed and bypassed it to improve medical care. The major aspect of the problem noted above was a result of an inefficient medical supply section for the brigade.

Lessons Learned

- Weak medical supply section at the brigade (or any other level) will be bypassed by providers if possible due to the urgent need for timely ordering and receipt of medical supplies.

- Units and commanders must ensure that their medical supply section is fully competent in their assigned duties and responsibilities.

- The motivation and attention to details necessary for tracking orders and supplies, knowing which medical supplies are on-hand, and initiative to remedy shortages must not be assumed by supervising NCOs and officers.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Medical Issues-Medical Logistics Personnel	10000-04100

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 3: Combat Lifesavers (CLS)

Observation Synopsis

Ensure unit's combat lifesavers (CLS) are fully trained and understand their role in the medical treatment process. Once-yearly training is insufficient to ensure they can perform necessary duties in a critical situation. There was at least one incident on the road where the targeted unit was rendered ineffective in terms of medical treatment by an improvised explosive device (IED) attack that resulted in several casualties. Another unit passing by stopped and took control of the situation, including providing medical care to the wounded. Specifically, CLS need extensive training in starting intravenous (IV) lines and providing appropriate first responder aid. Starting IVs is a skill that is difficult to do in controlled settings for the inexperienced (like the vast majority of combat lifesavers), and almost impossible to do in an emergency without prior proficiency. All vehicles traveling in a convoy should have at least one combat lifesaver with their bag. Vehicle first aid kits, though useful for minor injuries, are not sufficient for major traumas associated with IED, small arms, or rocket-propelled grenade (RPG) attacks on convoys. On more than one occasion, combat lifesavers did not have their bags available or in their possession because they were kept locked up or in storage to keep from losing them or to maintain accountability.

Lessons Learned

- Convoy commanders need to ensure a sufficient number of CLS providers are included in the personnel of each convoy.

- Prior to deployment, all combat lifesavers need to be trained and certified, have possession of their CLS bags, and exhibit confidence in using the enclosed medical supplies.

DOTMLPF Implications

Training: Recommend at least quarterly hands-on training, especially an IV starting workshop, and not just a paper or lecture review of basics to "check the block."

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Combat Lifesavers	10000-43949

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 4: Field Sanitation Teams

Observation Synopsis

No real evidence that field sanitation (FS) teams were operating as they were supposed to exists. Field sanitation teams did not appear to carry out any specific and/or significant duties during this deployment. During the summer months, very basic field sanitation requirements were met, but lack of attention to details resulted in increased rates of gastrointestinal illnesses among Soldiers. In particular, there were long periods of time (up to days) at various FOBs where there were either no hand washing stations or empty/dry hand washing stations adjacent to latrines. Even now, with the civilian contracted latrines (Port-A-Potties), there remains a shortage of hand washing stations around all the latrines in the area of operations. During maneuver, these issues may not be as important as others, but outbreaks of diarrhea among large numbers of Soldiers reduce mission effectiveness and are often the result of fecal-oral transmission of infectious agents. The reality in the field units is that the field sanitation team exists only to "check the box" and does provide a measurable function.

Lessons Learned

- Greater emphasis on field sanitation as a significant preventive medicine measure is needed and needs to be reinforced, not only with Soldiers, but with their NCOs and officers.

- Recommend specific emphasis be placed during unit inspections, field exercises, National Training Center (NTC) and the Joint Readiness Training Center (JRTC) rotations measuring the effectiveness and function of field sanitation teams to ensure Soldiers and their leaders understand the importance of this team.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Field Sanitation Teams	10000-97566

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 5: Laundering of Medical Contaminated Material

Observation Synopsis

Battalion aid stations are stocked with standard army green wool blankets for patients. These blankets, when used on a trauma patient, become contaminated with blood and other body fluids and require appropriate laundering. Despite deploying with these blankets, there did not appear to be a mechanism for washing and decontaminating these blankets. There is no procedure for this, but it did not appear that any of the other units in the AO knew what to do with them.

Lessons Learned

- Blankets contaminated with blood and/or other body fluids need to be stored until they can be properly decontaminated.
- Lack of a regular medical wool blanket laundering procedure depletes stocks.

DOTMLPF Implications

Doctrine: Establish a protocol to deal with cleaning wool blankets to ensure rapid reuse of limited supplies.

Materiel: Do not recommend elimination of the wool blankets, since the disposable combat casualty blankets are NOT equivalent.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Laundry Services	10000-15725

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 6: Medical Hazardous Waste

Observation Synopsis

There was no apparent established protocol for dealing with biohazardous waste in the field. Containers full of medical waste, specifically used needles and syringes, accumulated for a long period of time before a standing operating procedure (SOP) was established for disposing of them properly. No one seemed to know what to do with them initially.

Lessons Learned

- There is a need to know what to do with biohazard waste in the field.
- Establish a protocol or SOP to deal with hazardous medical waste in the field. This may already be addressed, but it did not appear it was common knowledge amongst the health care providers or medical logistics personnel.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Medical Hazardous Waste	10000-51660

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 7: Stretchers

Observation Synopsis

During the summer, with the extreme heat in Iraq, the older canvas stretchers started disintegrating. The canvas easily ripped, and it was difficult to remove the stains of blood and body fluids from them in an environment where water supplies were extremely limited.

Lessons Learned

- Canvas stretchers are not durable in the extreme temperatures of the Middle East.
- Water is not readily available to clean and decontaminate stretchers stained with blood or other body fluids.

DOTMLPF Implications

Materiel: The Army should replace ALL canvas stretchers with the new synthetic stretchers. The new stretchers are impermeable to fluids, they are stronger and easier to clean and maintain. They did not appear to be affected by the extreme desert environment.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Stretchers	10000-20588

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 8: Patient Transport

Observation Synopsis

There is established doctrine for transport of patients on a linear battlefield. This does not apply in the environment in Iraq, with risk of insurgent direct fire or IED attack. “Normal" lines of evacuation and ambulance exchange points were not applicable. A major concern was the need for a three-vehicle convoy to transport a patient to a higher level of care, or to retrieve patients from the area where they were injured. Current doctrine does not appear to take these factors into account and assumes that the ambulance (either a field litter ambulance [FLA] or track) will be able to move independently. On the non-linear battlefield in Iraq, the three-vehicle requirement severely limited the number of patient transports that could be accomplished in a given period of time. It also often delayed transport of less critical patients until enough vehicles and personnel to man them could be located to accompany the ambulance. This was further complicated by the requirement of a crew served weapon on each convoy, an asset the medical platoons or companies do not normally have.

Lessons Learned

- Additional armored vehicles are needed in the medical companies and platoons to accompany ambulances in a multi-vehicle convoy to a higher level of care.

- Establish an SOP for providing timely patient pickup from the battle site to the aid station and then to higher levels of care if needed in an environment with high risk of insurgent attack.

DOTMLPF Implications

Organization: Provide sufficient transport resources for the medical platoons and companies to allow them to evacuate patients without depleting all their available personnel.

Materiel and Organization: Include at least two armored HMMWVs and wheeled ambulances (like the new Stryker ambulances) in the brigade medical company.

"Track" Ambulance

Field Litter Ambulance (HMMWV)

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Patient Transport	10000-34104

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 9: Medical Communications

Observation Synopsis

Battalion aid stations (BAS) throughout the area of operations were not uniformly equipped with an adequate means of communications. Only about half of the BAS have direct digital nonsecure voice terminal (DNVT) access, which impeded timely communication of medical information and evacuation requests. This may not be an issue on the mobile battlefield, but that is not the case in Iraq.

Lessons Learned

- Direct telephone communication is needed between aid stations, evacuation assets, and combat support hospitals.
- Once a semi-fixed location is established for the BAS, appropriate means of long distance communication should be established. Specifically, DNVT, secure cell phone, or satellite phone networks if feasible.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Medical Communications	10000-84000

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 10: Medical Communications (Internal)

Observation Synopsis

Once located at the FOBs, an internal communications system is needed. This situation was remedied through the acquisition of various hand-held radios, with a 1-5 mile range, typically commercially purchased. This allowed for rapid communication on the FOB of non-tactical information since the system is not secure. Unfortunately, the wide range of different brands and types of radios made a true internal communications network impossible to achieve.

Lessons Learned

- A standardized local direct person-to-person communication system is needed.

DOTMLPF Implications

Materiel: AMC should purchase portable hand-held radios for person-to-person communications (for use similar to cell phone use in the rear) for key personnel, to be determined by each unit. Backup radios and supplies of batteries need to be acquired. This is an inexpensive remedy to a significant problem.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Medical Communications (Internal)	10000-07560

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 11: Personal Protection (Weapons) for Medics

Observation Synopsis

A medic on a convoy or raid typically carries an M16 rifle for personal protection in addition to his aid bag. The length of the full sized M16 rifle makes it difficult to exit a HMMWV (that still has its doors) or carry/lift a patient. Usually the rifle needs to be put down on the ground or left with the vehicle when treating a casualty, making it difficult to keep in arm's reach. If the M16 rifle is affixed to the medics' web gear, typically with a D-ring or strap to the right side, bending over a patient on the ground results in the weapon restricting range of movement.

Lessons Learned

- Since medics carry weapons purely for personal defense, an M-9 pistol or an M-4 carbine would serve them better than an M-16 rifle while treating casualties. This would allow them to maintain control of the weapon while caring for a patient instead of laying it on the ground.

DOTMLPF Implications

Materiel: Provide medics & healthcare providers with an M-9 pistol and 9mm submachine gun (HK MP5 or similar) – light and small enough to keep affixed to the Soldier during all aspects of combat casualty care in the field. As an alternative, substitute the M-4 carbine for the M16 rifle for medics and healthcare providers.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Personal Protection (weapons) for Medics	10000-57456

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 12: Medic Bags

Observation Synopsis

The one-compartment medic bags in use by most field medical units do not organize emergency medical supplies well. Supplies often come in different sizes and different packaging from the various vendors. The aid bag does not have sufficient divided compartments to separate supplies needed for different types of traumas. Medical personnel are spending their personal funds to purchase commercially available medical bags, at significant expense, to replace the issue bags which do not meet their mission requirements.

Lessons Learned

- Many very competent medics, especially special operations medics by observation, have replaced the standard issue bag with commercially purchased bags.

DOTMLPF Implications

Materiel: AMC should replace the current medic aid bags with commercially purchased medical bags, specifically the type offered by BlackHawk Industries (or equivalent manufacturer) in a backpack form with several compartments.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Medic Bags	10001-00800

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 13: Forward Litter Ambulance (FLA) Utilization on the Battlefield in OIF

Observation Synopsis

During initial operations in OIF, armor and infantry units identified the need for mobile treatment platforms (vehicles) to accompany maneuver cordon and search urban operations. Maneuver units by MTOE possess traditional M577 command post carriers as a mobile treatment platform. However, this platform does not meet the operational requirements of the maneuver element. Initially, medical company assets within the FSB were misused as a treatment/mobile aid station. However, FLAs should be used only as an evacuation platform. Ultimately, the FSB coordinated with the division which augmented each FSB with additional corps FLAs to be used in a non-standard capacity.

Lessons Learned

- Armor and infantry units identified the need for mobile treatment platforms to accompany cordon and search urban operations.
- Maneuver units by MTOE possess traditional M577 command post carriers as a mobile treatment platform. However, this does not meet the operational requirements of the maneuver element.
- FLAs can be used in a non-standard capacity to support the manuever unit mission on a "by-exception" basis.

DOTMLPF Implications

Doctrine: During combat operations, units may be authorized non-standard use of FLAs by maneuver units, provided they are not taken from internal medical company assets.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Forward Litter Ambulance (FLA) Utilization on the Battlefield	10002-51370

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 14: Communications in the Medical Community

Observation Synopsis

Divisions currently do not possess a reliable communications platform within the medical community. The sensor (SENS) and retransmission stations go down far too often. Additionally, between the various brigades, division main (DMAIN) and division support element are great distances. Units have gotten into the habit of using a division's worth of communications assets to support a brigade at the National Training Center and are lulled into a false sense of security that all communications systems work. Currently, many units in the medical community in OIF have had access to digital nonsecure voice terminals (DNVT), FM, tactical local area network (TACLAN), Iridium Phone, and Spitfire Radio systems, and have not been able to maintain contact with either the division surgeon and/or EAD medical elements. This hinders a unit's ability to submit reports, order CL VIII, coordinate for blood distribution, and, most importantly, coordinate air and ground evacuation. Additionally, the FM communications with aircraft is very difficult, whether it be in single channel plain text or frequency hop. The range on the radios makes it difficult to communicate with air MEDEVAC assets greater than a mile out.

Lessons Learned

- There must be redundancy established in the communications infrastructure and there will be days when communications cannot be established.
- SENS and retransmission stations are not reliable in a turbulent and austere environment, especially in dust storms.

DOTMLPF Implications

Materiel: Medical companies need to be fielded UHF/VHF radios specifically for communicating with aircraft, as well as HARRIS radios for long range communications.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Communications in the Medical Community	10001-75185

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 15: Force XXI Changes at the DMOC and the DSS

Observation Synopsis

Under AOE doctrine, there is a division medical operations center (DMOC) that falls under the division support command (DISCOM) commander and coordinates all medical operations in the division. Under Force XXI doctrine, the DMOC is rolled up under the division surgeon's section (DSS). In garrison, the DSS works in the division headquarters and reports to the commanding general. Doctrinally, in the field the DSS is supposed to be a part of the division support element (DSE) which is run by the assistant division commander-support (ADC-S) and DISCOM CDR. Once established, the DSS relocates with DMAIN, cutting all lines with the DISCOM. The DISCOM CDR is the senior CSS officer in the division and manages all CSS assets in the division. By having the DSS/DMOC at DMAIN, the DISCOM CDR loses all visibility of combat health support (CHS). By divorcing themselves from the DISCOM, the DSS/DMOC has lost the ability to have a colonel/O6 commanding.

Lessons Learned

- Doctrinally, in the field the DSS is supposed to be a part of the DSE which is run by the ADC-S and DISCOM CDR.
- By having the DSS/DMOC at DMAIN, the DISCOM CDR loses all visibility of CHS.

DOTMLPF Implications

Organization: The DMOC should be stood back up. The other option is that DISCOM is authorized an O4 medical planner, but it has traditionally been filled with a post-AOC/pre-command captain (if it is filled at all). If it was filled properly, this individual could operate as a pseudo-DMOC, coordinate with the DSS, and properly advise the DISCOM CDR.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Force XXI changes at DMOC and the DSS	10000-83790

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 16: Class VIII Management

Observation Synopsis

Under Force XXI doctrine there is no longer a DMSO. Each forward support medical company (FSMC) is authorized a medical supply sergeant, two medical supply specialists, and a medical maintenance repairman to make up for this loss. Additionally, the FSMCs and medical platoons have been issued MC4 systems with the defense medical logistics standard support (DMLSS) module to help them manage medical supply. Although the FSMCs are authorized this, an approved supply list (ASL) has never been developed and there has been absolutely no contractor support for MC4 in the OIF theater. In one FSB, although there were assets to manage Class (CL) VIII, the division medical logistics officer (DMLO) required all medical units use the division medical supply office (DMSO) when in theater. For that particular unit, it did not appear to be the best route since the medical logistics battalion was fewer than 45 minutes away, yet the DMSO was over three hours away. Although the DMLO kept insisting they go through DMSO, the unit went around him and did what they needed to do to get supplies.

Lessons Learned

- Some units never practiced doctrinal CL VIII management in garrison and always tried to make doctrine work at Combat Training Centers.
- War time practices need to be used in garrison so there is a seamless transition once a unit does deploy.

DOTMLPF Implications

Organization: Develop a CL VIII ASL for the FSMCs and then manage it at the support operations officer (SPO) level just like every other class of supply.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Class VIII Management	10001-48965

Chapter 4: Combat Service Support
Topic F: Health Service Support
Subtopic 17: Wheeled Ambulance Availability

Observation Synopsis

In a non-linear urban environment, many maneuver units want wheeled evacuation assets. The FSMC's wheeled ambulances go forward of the maneuver unit's BAS. Additionally, since the FSMC is only authorized four wheeled ambulances, there were not enough to go around.

Lessons Learned

- Maneuver task forces need to utilize non-standard platforms and need to either be resourced additional wheeled platforms from APS stocks or authorized wheeled platforms.

DOTMLPF Implications

Organization: Maneuver medical platoons need to be authorized two wheeled ambulances and FSMCs need to be authorized an additional two for a total of six wheeled ambulances.

Table of Supporting Observations

Observation Title	CALLCOMS File Number
Wheeled Ambulance Availability	10001-48965

APPENDIX A
OIF Table of Supporting Observations

Observation Title	CALLCOMS File Number
CPA - Military expectations	10001-01732
Use of Maps	10000-37370
CMOCs need to be advised of Iraqi detainees	10000-26307
Task force assuming ministerial responsibilities	10000-09857
Area knowledge and language capability is critical in Iraq	10000-83709
PAO Messages	10000-84767
Weapons	10000-22970
Communications in convoy ops	10001-89551
Utilization of NVG(night vision goggle)	10001-04895
Bridge erection boats	10000-34188
BDTs	10000-92308
Water Operations from the DISCOM Perspective	10000-01288
IO impact on IED	10000-11357
IO Synchronization and time line	10000-05242
CSS Convoy Protection from the DISCOM Perspective	10000-34960
Small Arms Support of Local Militia and Police Forces	10000-24590
Insufficient Intelligence Collection for CSS Force Structure	10000-43056
Counterpropaganda	10000-00749
EW assets available to division	10000-12020
Intelligence collection to support MOE analysis of IO	10000-14882
OSINT Media Analysis	10000-25805
Engagement Activities	10000-04742
Counterpropaganda	10000-20966
IO PIRs	10000-13728
Local Audience Engagement	10000-07738
Nontraditional Collection	10000-22464
Cultural Awareness	10000-13104
Contract support	10001-37280
Captured enemy ammunition mission.	10000-03058
Police the battlefield	10001-32678

Constructing entrances and traffic control devices at forward operating bases	10000-51480
Non-existent Long-Range Communications for CSS Force Structure	10000-40755
Sterilization of STAMIS (SARSS) Boxes	10001-29593
Awaiting CPA direction slowed civil administration progress	10000-03026
Development of a Project Coordination Cell	10000-48321
Division G5 Section not fully staffed	10001-54627
CA Brigades need to modify its current organization	10000-42682
Civilian skill set database unused	10001-60150
More training needed in establishing a civil administration	10002-13408
Tribalism is a means to an end	10000-42998
Mobilization NBC Training gave soldiers confidence in protective mask	10000-64210
Collateral Damage	10001-29730
CA response with regard to detaining the relatives of suspects	10000-38938
CTC experience was the best training in preparation of the mission	10000-43115
Tribal leaders	10000-53235
Cultural Awareness	10000-20736
IO Training	10000-29184
Measures of Effectiveness	10000-54320
Staffing	10001-16788
Human Factors Analysis	10000-03924
Senior Officer Education	10002-04160
Linguists	10000-43120
Hardware Repair Parts	10000-13555
Vulnerable STAMIS Hardware	10001-16899
Insufficient Range Capability of FBCB2 to support the CSS Force Structure	10000-29668
Class VIII Medical Re-Supply	10000-03182
Medical Issues - Medical Logistics Personnel	10000-04100
Combat Lifesavers (CLS)	10000-43949
Field Sanitation Teams	10000-97566
Laundry Services	10000-15725
Medical Hazardous Waste	10000-51660

Stretchers	10000-20588
Patient Transport	10000-34104
Medical Communications	10000-84000
CMO mission statements lack a purpose	10000-03271
Medical Communications (Internal)	10000-07560
Personal Protection (Weapons) for Medics	10000-57456
Medic Bags	10001-00800
Water distribution on the Battlefield for the AOE BCT under Force XXI	10000-45797
Shooting at Civilian Vehicles	10000-35897
Assessments	10000-75348
Contracts	10000-20790
Cultural Awareness 2	10001-85976
Customizing Message	10000-11109
IO Messages	10000-31584
Linguists2	10000-12012
Shortfalls in IO	10000-53147
Utilization of FET and FEST teams	10000-05292
Reach back to USACE	10000-03667
Unfulfilled Contracting Expectations	10000-08140
Tribal Policies	10000-97902
Situational Awareness	10001-55904
Spare Tires	10001-66219
Combat Lifesaver	10000-41202
Infantry training for all soldiers	10000-17136
Medevac Frequency	10001-05000
Brigade Media Analysis	10000-09139
Media on the Battlefield	10000-02419
Phased Movement Occupation and Split Based Configuration of Units in OIF.	10000-88406
Staff Relationships	10000-16128
PA Training	10000-06989
Flying altitude	10000-08131
Treatment of Remains Moved to Theater Collection Point	10000-14544
Forward Litter Ambulance (FLA) Utilization on the Battlefield in OIF	10002-51370
Laundry Advanced System (LADS) Improvements over M-85 Laundry Trailer	10000-05265

Effects of High Saline Content in the Water table on ROWPU Components	10001-07865
Soldier fighting positions	10000-19872
Headlights on HMMWVs	10000-10263
Laser sites on weapons	10001-21670
Construction workforce available in AOR.	10000-29348
Battalion IO	10000-81780
IO Planning	10000-33389
IOWG	10000-11449
IPB Process	10001-05468
TV/Radio Station	10000-12812
Additional FSB MTOE Equipment Requirements in OIF	10000-90160
Communications in the Medical Community	10001-75185
Force XXI Changes at the DMOC and the DSS	10000-83790
Class VIII Management	10001-26430
Wheeled Ambulance Availability	10001-48965

Designated Chain of Command Within a Base Camp	10002-34416
Long-distance Communications in OIF.	10000-04312
Land Management within Base Camps	10001-01332
End of Fiscal Year Mass Cancellations During OIF	10000-75460
STAMIS VSAT Satellite Network in OIF	10000-42998
Describe integration of S5 into BDE Staff	10000-94047
Radio and Television Dissemination	10000-09574
Brigade IO	10000-34560
Brigade IOWG	10000-18576
IO Long and Short Term Planning	10000-09792
Command Emphasis on IO	10000-03456
Cultural Training	10000-43200
CA Staff Augmentation to Brigade Staff	10000-41328
PSYOP Activities	10000-26496
OPSEC Procedures	10000-00720
CMO boundaries are the same as maneuver boundaries	10000-15642
The doctrinal template of CA forces need to be re revised based on METT-TC	10000-49086

CA operators and S5s require training in project management	10000-08640
CA Elements require force protection augmentation	10000-04608
Employment of Junior CA NCOs	10003-02400
BN CDRs expectations for incoming CA forces	10000-13536
Describe coordination with the Coalition Provisional Authority	10002-03688
S5s serving also as commander	10000-46552
Foreign Weapons Training	10000-63840
Communications training	10000-10100
Involvement in MDMP	10000-38940
Staff Training	10000-66930
No CMO Annexes developed	10000-03200
Division IOWG	10000-02822
Division PSYOP Support	10000-46099
Dealing with Foreign Media	10000-86659
Media Operations Center	10000-09792
PAO Activities	10000-31008
IO Coordination	10000-20563
Using Media to Send IO Messages/Themes	10000-57120
Rotation Duration	10001-64070
Need for Translators	10000-90900
Task Force Neighborhood	10002-37475
Selection Support Team for Provincial Governments	10000-70200
Effects Coordination Cell	10001-10670
Raiding Mosques	10000-75600
Assessments	10001-55250
Building clearing in the IQ urban envir.	10002-74712
FOB Consolidation	10000-36353
Contractor Standards	10001-37445
Utilization of local leaders as an intelligence source.	10000-74970
Fuel convoy operations	10000-20089
Difficulty in receiving repair parts.	10000-46818
Vehicle service requirements	10001-49573
Fielding Ordering Officer (FOO) funds	10000-16998
Effective method for relief in place.	10002-34090

Forward Repair Activities in OIF	10000-85466
DODAAC/UIC and MMC Changeover for Deployment	10000-79764
Use of CL IX Expeditors	10001-44228
SSA Support in OIF	10000-05967
Warehousing From the DISCOM Perspective	10000-49419
Retrograde of Equipment in OIF	10000-37271
Communication Challenges in the Logistics Community during OIF	10000-75602
Training on Field Sanitation	10000-54475
Training on BCT logistics operations	10000-57502
Media Outlet Identification	10000-89440
Home Media	10000-87854
Leave Rotation	10000-77173
MOE and Assessment	10000-33869
Personal Iraqi Property	10001-26882
Division IOWG and Targeting Boards	10000-62208
Other Nation IO Training	10000-32832
Expectation Management	10000-44928
Division IO Focus	10000-05808
Mapping products	10002-03213
EOD units in the AOR	10000-26928
Sapper battalion versatility	10001-59544
Brigade/Group HQ too austere for full scale C2 across the full spectrum of	10001-01640
Reserve mobilization	10000-50600
Track and Tire Consumption in OIF	10000-54417
Materiel Handling Equipment (MHE) Maintenance in OIF	10000-19140
Providing Bulk Fuel to the Iraqi Civilian Population	10001-64835
Civilian Iraqi Bulk Fuel Management from a Coalition Perspective	10000-05841
Importance of Information Management for Coalition Transporters	10001-05952
Staffing of Contracts	10000-67221
Kuwaiti Translators	10001-21737
Recognition of geopolitical boundaries	10000-16880
Religious Holidays	10000-19008
Personal Contacts between G5 and S5s	10001-12860

Crew Served Weapons	10000-55550
Force Protection	10001-06590
Imam Targeting	10000-39479
IO Themes and Targets	10000-04224
Junior Officer Education	10000-71995
Newspaper	10001-89805
Staffing2	10000-72556
Governance tools for the commander	10001-95597
Good News	10000-65268
Operational Assessment	10000-23755
Over assessing	10000-43268
Need for formal S5 Training	10000-02576
Civil Affairs Battalion Functional Teams	10001-43582
Crowd Control Training	10000-25974
Writing orders	10001-31544
General Officer Steering	10001-66320
Post-TOA project	10000-29808
CMO training in advanced courses	10000-63990
Modified Ranges	10001-73280
Counter Remote controlled improvised explosive devices	10000-80028
CA Brigades do not have enough vehicles	10000-38304
CA Brigade rank structure	10000-01824
Need for more CA Companies and Teams	10001-12837
Issuing of DCUs	10000-03278
Use of Banners	10001-47379
CA teams elements were under equipped	10000-78432
CA as a force provider to CPA	10000-13862
CA command and support relationships	10000-43776
Surveys of Iraqi Populace	10000-67032
Linguists3	10000-52668
MOE2	10000-57815
Training in Field Sanitation	10000-41446
Training on BCT logistics operations	10000-42874
Media Outlet Identification	10000-47600
Home Media	10000-68190
Leave Rotation	10000-23746

APPENDIX B
VTC Briefing

Center for Army Lessons Learned (CALL)

Operation Iraqi Freedom (OIF)

Combined Arms Assessment Team (CAAT II)

VTC

Opening Remarks

- Introductions
- Roll call
- ROW
- Security issues

Agenda

- CAAT mission
- CAAT composition
- Collection overview
- End state
- Time line
- Emerging themes
- Closing remarks

Mission

Call forms, trains, and deploys a CAAT to Iraq in FEB 2004 to collect CJTF-7 insights and observations on Phase IV operations. Issues for the CAAT include Civil Military Operations, Information Operations, cultural awareness training, and warfighting sustainment training.

CAAT Composition

Position	Rank/Name	Specialty
Team Chief	LTC Casey	36th IO CMD
CA	MAJ McDonnell	HQ, USACAPOC(A) (G3 Tng)
CA	MAJ Varhola	352nd CACOM
EN	COL Green	USACE
Info. Ops	MAJ Barrow	36th IO CMD
Info. Ops	MAJ Hall	1st IO CMD
Logistics	MAJ Osborn	JRTC OC (logistics EAD)
CALL OPSO	CPT McDannald	Operations Officer (FA) CALL
OPSNCO	SFC Bolsinger	Operations NCO (FA)

Collection Plan Focus – UJTL/AUTL Tasks

Civilian Military Operations – Engineer

- Provide general engineer support
- Provide civil-military engineering
- Occupy terrain
- Conduct nonlethal engagement
- Enhance movement
- Construct/repair combat roads and trails
- Detonate mines/explosives
- Provide Battlespace hazard protection
- Provide engineer construction support
- Provide engineer construction material

Supply and Field Services

- Arm
- Fuel
- Distribute
- Fix/maintain equipment
- Medical equipment
- Feeding
- Provide health services

Information Operations (IO)

- Coordinate IO
- Integrate operational IO
- Control IO
- Coordinate theater-wide information warfare
- Conduct nonlethal engagement
- Conduct battlefield, psychological activities
- Manage information distribution
- Protect forces and friendly populace from PSYOP attack
- Employ operations security
- Conduct deception in support of tactical operations

Civil Military Operations – Civil Affairs

- Conduct Civil Military Operation in the JOA
- Transition to Civil Administration
- Coordinate Civil Affairs in the JOA

End State

- Insights, observations, and feedback provided to:
  - Visited units
  - Follow-on units
  - CTCs
  - Rest of the U.S. Army
- Incorporation of lessons learned into emerging DOTMLPF implications

OIF CAAT II

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
January 18	19	20 Team arrives Ft. Leavenworth	21 Pre-deployment workshop	22 →	23 →	24 →
25 Fly to Bliss CRC	26 CRC →	27 →	28 →	29 →	30 →	31 →
February 1	2 Travel to AOR	3 Arrive Kuwait	4 Travel to Tikrit Team collects 4ID	5 →	6 →	7 → DMAIN/DISCOM → 1BCT
8 →	9 →	10 →	11 →	12 →	13 →	14 →
1BCT	3BCT	3BCT	3BCT	3BCT	2BCT	2BCT
15 Travel day Team arrives 1AD →	16 →	17 →	18 →	19 →	20 →	21 Travel day Team arrives MND (SE)
	354th CA BDE/USACE	354th CA BDE/USACE	2BCT 1AD	2BCT 1AD	DMAIN	
22 →	23 →	24 →	25 →	26 →	27 Travel BIAP	28
DMAIN	DMAIN	DMAIN	DMAIN	DMAIN		
29 Out-brief CJTF-7	March 1 Travel to Kuwait turn in IBA/ammo	2 RCERT meeting	3 Depart AOR	4 Arrive Bliss	5 Out process CRC Bliss	6 Post workshop at Ft. Bliss
7 Post workshop at Ft. Bliss →	8 →	9 Team released	10	11	12	13

Emerging Themes Engineering

- Force protection
  - Weapon mounts and up-armor for engineer equipment
  - Convoy escort operations
  - Weapons, individual comms equipment, and thermal night vision
- UXO and captured enemy ammunition
  - Part of USACE Field Force Engineering (FFE)
  - Train combat engineers to do mission
  - Create graduated explosives ordnance capability
- USACE
  - Embed LNOs at battalion level
  - LNOs should have contract warrants to assist in CERP program
- Construction management training
  - Incorporate into engineer officer/enlisted education
  - Quality assurance/quality control

Emerging Themes Engineering (Cont.)

- Combat engineer battalion
  - – Should include organic engineer recon team
  - – Train personnel in infrastructure rebuilding
- EN BDE/GRP HQ
  - – Lack construction design and management section
    - - Command and control of construction activities
    - - Contracting, QA/QC
  - – Lack of S5 section
    - - Leverage local resources
    - - Integrate engineer effort with CA
- Engineer reserve component units
  - – Lack of repair parts and PLL for initial theater occupation
  - – Replacement operations nonexistent
  - – Mobilization station validation should occur at home station

Emerging Themes Information Operations

- IO training
  - – Limited training at division and below, some staff dual-hatted
  - – Formal/cultural training helpful
  - – OES (OBC, CCC, ILE)
- IO focus, plans, and execution
  - – Population engagement, use of local talent
  - – IOWG and synchronization
  - – Use of talking points, Nested and AOR specific
- Media interaction
  - – Integration into Warfighters and CTCs
  - – Media analysis

Emerging Themes Information Operations (Cont.)

- MOE and operational analysis
  - Limited resources
  - Outside organization can be 'honest brokers'
- Expectation management, establish and maintain credibility
- Use of indigenous media
  - Radio, TV, and print
  - Established relationships with local media effective
- IO 'battle drills,' immediate public dissemination to explain coalition operations

Emerging Themes Civil Affairs

- Integration of Task Force CMO effort
  - Lack of clear CMO roadmap
  - CA command/support relationships
  - Task force G5/S5 augmentation
  - Role of CA brigade headquarters
  - CA as a force provider to CPS
  - Maneuver unit support for force protection
- Transitioning to civil administration
  - Brigade commander's focus
  - CMO is an entire task force effort
  - Contracting knowledge/project management
  - Effects coordination cell
  - Overlay of military sectors
  - Identification and development of local governance structures
  - Unemployment, great concern

Emerging Themes Civil Affairs (Cont.)

- Cultural issues in Iraq
  - – Preparation in language and political/ideological/cultural training
  - – Tribal and religious structures
  - – Iraqi perceptions of U.S. practices and operations
    - - Detention of family members
    - - Shooting at civilian vehicles
    - - Theft on raids
  - – Raiding mosques
  - – 'Task force neighborhood'
  - – Capturing Iraqi sentiment
  - – Crowd control
  - – Muslim religious holiday
- MTOE issues
  - – M240 SAWs
  - – Intra-team communication
  - – M4 carbines
  - – Enhanced protection/up-armored HMMWVs

Emerging Themes Logistics

- STAMIS challengers
  - – CSS units can expect
- Support to contractors
  - – CSS units must arrive in country capable to provide support to KBR
  - – Must be able to perform functions when contractors are not available
- Convoy security/training and equipment
  - – CSS units must arrive in country organized with weapons platforms (M1025/M1026)
  - – CSS units must be proficiently trained to perform convoy security without augmentation from combat units
- Repair parts visibility
  - – CSS units must have in-transit visibility for repair parts (60 days)

Closing Remarks

- Previous and future CAATS:
- Websites:
  - http://call.army.mil/
  - http://call.army.smil.mil
- email for information concerning this CAAT:
  - donald.mcdannald@leavenworth.army.mil

Center for Army Lessons Learned

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