Maneuver Support Magazine

Winter 2009

Full Spectrum Warriors

Maneuver Support Points of Contact

United States Army Maneuver Support Center

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PURPOSE: This publication presents information designed to keep maneuver support personnel informed of current and emerging developments within the field and provides an open forum in which ideas; concepts; tactics, techniques, and procedures; historical perspectives; and problems and solutions can be exchanged and discussed for purposes of enhancing professional development. However, all information contained in the submissions must be unclassified, nonsensitive, and releasable to the public.

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Maneuver Support Magazine

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UNITED STATES ARMY MANEUVER SUPPORT CENTER

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DEPARTMENTS

Inside Front Cover - Maneuver Support Points of Contact

2 **From the Commanding General**
By Major General Gregg F. Martin

3 **From the Command Sergeant Major**
By Command Sergeant Major Michael D. Hayes

45 **Writing for the *Maneuver Support Magazine***

46 **Maneuver Support Update**

49 **Top 10 MANSCEN Capabilities Development Priorities**

FEATURES

4 **The Maneuver Support Enterprise: The Vision From My Foxhole**
By Major General Gregg F. Martin

6 **Leadership the "Leahy Way"**
By Major General Gregg F. Martin

8 **The Maneuver Enhancement Brigade**
By Colonel Charles A. Williams and Mr. Joe Crider

12 **Weapons of Mass Destruction–Civil Support Team: The Title 32 Initial Response Force**
By Lieutenant Colonel Christian M. Van Alstyne and Mr. Stephen H. Porter

17 **The Joint Capabilities Integration Development System: How Do We Start and Why Do We Use It?**
By Mr. James Harshbarger

18 **MANSCEN Capability Development and Integration Directorate: A Force of Change**
By Mr. Vernon L. Lowrey

22 **Joint Acquisition CBRN Knowledge System (J.A.C.K.S.)**
By Mr. Barrett K. Parker

24 **Concept Capability Plan: Combating Weapons of Mass Destruction**
By Mr. Larry Lazo, Lieutenant Colonel Thamar Main, and Lieutenant Colonel Bret Van Camp

28 **Integrated Unit, Base, and Installation Protection: The DOTMLPF Change Recommendation Process**
By Mr. Michael J. Martori and Colonel Arthur L. Clark

30 **Performance Enhancement...Without the Steroids**
By Mr. John Arata

33 **Appearing Larger Than We Are: The Story of the 1st Brigade Special Troops Battalion, 1st Brigade Combat Team, 82d Airborne Division**
By Lieutenant Colonel Frederic A. Drummond and Major James H. Schreiner

39 **Maintenance in the Brigade Special Troops Battalion**
By Lieutenant Colonel James W. Craft III and Chief Warrant Officer Three Louis Watkins, Sr.

43 **Operation Sand Castle 2008: Taking It to the Next Level and Beyond**
By Major Jon A. Brierton

From the Commanding General

By Major General Gregg F. Martin
United States Army Maneuver Support Center

Teammates, Partners, Stakeholders, and Friends: Thanks for your role and interest in the Maneuver Support Center of Excellence (CoE). We achieve our purpose of defending America by building the best possible people—Soldiers, Leaders, Joint Warriors, Civilians, and Families—strong of mind, body, heart, and spirit; expertly and selflessly serving and supporting our military and nation in full spectrum operations, now and in the future; and developing and providing the concepts, capabilities, services, and support to make them successful.

It is an enormous privilege and honor to lead this large, complex, and critically important enterprise which includes the Maneuver Support Regiments—Chemical, Engineer, Military Police—and our many stakeholder groups across schools, branches, Army commands, and our joint counterparts and partners. I look forward to collaborating and teaming with this core group and encourage communication, feedback, and dialogue across these groups and with me.

Teamwork, along with open, honest, candid dialogue, is crucial to our collective endeavor. In this spirit, I see this publication as a tool to encourage, foster, and enable the sharing of good ideas, lessons learned, and experiences from our full spectrum operations and across doctrine, organizations, training, materiel, leadership and education, personnel, and facilities (DOTMLPF).

Also in this spirit, I invite and encourage you to engage with our leaders at the Maneuver Support Center (MANSCEN). We have a tremendous team of experienced, dedicated professionals in our three schools and regiments, and at the Center level. Dialogue and communication will ensure that this magazine reflects my intent: rigorous analysis, critical thinking, and vigorous intellectual debate on the complex issues of our profession. The key to positive change in our military profession is for all of us to think, engage, and write!

Since the last issue of this magazine, we conducted a change of command on 9 October 2008, in which the TRADOC Commanding General, General Wallace, passed the MANSCEN colors from Major General Bill McCoy to me. I am reminded that we all stand upon the shoulders of those who soldiered before us. Thank you Jill and Major General McCoy! We also conducted a MANSCEN senior leader offsite in which we used the book *Good to Great* by Jim Collins and applied its concepts to our organizations and priorities here at MANSCEN. More to follow on these planning efforts… In the meantime, I am publishing my intent and command philosophy on pages 4-5 for your awareness and to foster transparency and teamwork. I welcome your feedback as we move forward.

I encourage each of you to develop and execute your personal and professional goals in 2009; to stay SAFE, healthy, and fit; and to take good care of each other. Please continue your important work on behalf of our Army, Joint Force, and Nation, and be heartened to know that you are making a positive contribution. To those in harm's way, keep up the great work, and know that you and your Families are the focus of our support and efforts and are continuously in our thoughts and prayers.

Thanks for all you do and for who you are! Wishing you and yours all the best in 2009 and beyond! Stay safe! Army Strong!

Teammates:

I am delighted to announce that I have selected Command Sergeant Major Corbly L. Elsbury, Command Sergeant Major, 1st Brigade Combat Team, 10th Mountain Division, Fort Drum, New York, as our next MANSCEN and Fort Leonard Wood Command Sergeant Major, effective 1 May 2009. CSM Mike and Olga Hayes will be retiring from the Army in May 2009, after a magnificent career of selfless service to our Army and Nation.

CSM Elsbury has an incredible 26-year background as a Soldier, Leader, and Warfighter. He has extensive recent combat experience during full spectrum operations in both Afghanistan and Iraq.

Like CSM Mike and Olga Hayes and Family, CSM Corb Elsbury and wife Kelly and Family will be a great asset for our MANSCEN and Fort Leonard Wood Team, as we execute our Mission and take care of our People.

Thanks again for all you do!

Maggie and I wish you and your loved ones all the best in 2009!!!

Maneuver Support Center

World-Class in All We Do

TRAIN, SUPPORT, TRANSFORM, CARE, ENGAGE

From the Command Sergeant Major

By Command Sergeant Major Michael D. Hayes
United States Army Maneuver Support Center

I would like to welcome you to another great issue of the *Maneuver Support Magazine*. This publication helps keep our forces informed on current and emerging developments and serves as a tool for enhancing your professional development.

The successes of the past will not be sufficient to meet the challenges of the future unless we are a well-trained, disciplined force committed to prevailing against the tragic events of 11 September 2001. That one, solitary act by the enemies of freedom and democracy serves only to strengthen our resolve and focus our efforts to ensure that we—as Soldiers, Sailors, Airmen, and Marines—are fully prepared to defend our communities and our Nation against all enemies, both foreign and domestic.

Our professional competence, leadership abilities, and initiative have been the primary reasons that America's armed forces are the best in the world. Given our increasing involvement in the demands of this war, it's even more important that we attain the highest possible level of professional skill and help our junior noncommissioned officers (NCOs) and enlisted personnel become World-Class in All They Do.

It is critical that as leaders and mentors we seek opportunities for professional development . . . but sometimes it is challenging to do so because of irregular schedules, deployments, reassignments, and Family commitments. Professional publications like the *Maneuver Support Magazine* knock down all those barriers and keep you informed on the latest technologies and efforts in fighting the War on Terrorism.

One thing that's important to the Army leadership, from the Chief of Staff on down, is Soldiers being able to reach out and touch training—and that's what's provided within the pages of this publication. Here, subject matter experts and individuals with combat experience gather to provide you the latest information on training and professional development that has the potential to touch every Soldier and Civilian in the Army today.

As an NCO, I encourage you to mentor the Soldiers and Civilians entrusted to your care. Look for those individuals who have been where you want to go in your career and are willing to act as guides and friends. Learn from them by reading about their experience and draw from the knowledge provided to you. A mentor's task is to take individuals under his wing and direct them toward the next step in their career, or to teach them a better way of soldiering. Even the brightest members of an organization will stagnate unless someone higher up the ladder mentors and trains them to become world-class performers.

> *"A mentor's task is to take individuals under his wing and direct them toward the next step in their career, or to teach them a better way of soldiering."*

The Army's best Soldiers are leaders who are organized, trained, equipped, and ready to deploy, fight, and win—today and in the future. Success in today's military is making a positive difference in the lives of others and doing the best you can with the talent you have, wherever you are.

In closing, I am pleased with the way our NCOs continue to maintain high standards and lead the way as we fight the War on Terrorism together. I am proud to be serving as a Soldier in this great Army. I ask that each of you remember the Soldiers, Sailors, Airmen, and Marines who are away from homes and Families. May God bless our fallen comrades and keep watch over our sons and daughters as we continue the fight. Stay safe, and may God bless you, your Families, and our Soldiers.

World-Class in All We Do
TRAIN, SUPPORT, TRANSFORM, CARE, ENGAGE

The Maneuver Support Enterprise: The Vision From My Foxhole

By Major General Gregg F. Martin

To understand where I am coming from and where I intend to lead the Maneuver Support Center (MANSCEN) and Fort Leonard Wood (FLW), I offer the following in the spirit of transparent communications and sharing my goals, intent, and philosophy. It is my desire that together we strengthen and grow our collaborative community of purpose, in order to more effectively support the maneuver and joint force commander and, ultimately, the American people.

We must put our people first and foremost. I believe that our Army is not only made up of people—it IS people! Our people—Military, Civilians, and Families—must be our main effort, from training, leader development and education, to services, facilities, and quality of life.

MANSCEN at a Glance

Our Mission:

The Maneuver Support Center, enabled by a world-class garrison at Fort Leonard Wood, creates Warriors and develops Leaders and capabilities that assure the mobility, freedom of action, and protection of the forces they support.

Our METL:

Train:
Training Joint Warriors and developing innovative, adaptive Leaders prepared for full spectrum operations

Support:
Supporting our forces in combat today

Transform:
Transforming and integrating maneuver support organizations and capabilities based on the Army's current needs and future vision

Take Care Of:
Taking care of our Service members, Civilians, and Family members

Engage:
Regularly engaging our stakeholders to assure their understanding and support

Postured to support the Army and Nation as TRADOC lead or proponent for the following capabilities development areas

Improvised Explosive Device (IED) Defeat
- **Combating Weapons of Mass Destruction (CWMD)**
- **Maneuver Enhancement Brigades (MEBs)**
- **Brigade Special Troops Battalions (BSTBs)**
- **Protection**
- **Future Combat System (FCS) Unmanned Ground Vehicles**

Our Vision:
World-Class in All We Do!

My intent is that every one of the 90,000+ Soldiers, Leaders, and Joint Warriors who trains or is stationed at FLW—from privates in basic combat training, to colonels in the Precommand Course, to permanent party—becomes a stronger, healthier, better person in mind, body, heart, and spirit; is grounded in the basics of our profession and the Army values; is expert in their specialty; is adaptive, innovative, and flexible for success in full spectrum operations; is inspired and passionate to serve, learn, and grow today and in the future; and is built to last and thrive in an uncertain future.

Further, I want every one of our people to enthusiastically engage our stakeholders and the American people and effectively tell their own and the Army (or their Service) story. This encourages others to serve, either in the military or in some form of public service. Consequently, whether they serve for 4 years or 40 years, they undoubtedly will leave our Army and military as better citizens who continue to love and serve America.

We must also strive for excellence in our other crucial functions and missions such as doctrine, organizations, materiel, support to our forces at war, and transformation. These functions and missions are critical in supporting our people with capabilities and concepts that enable them to most effectively achieve their purpose and succeed in full spectrum operations, in support of the maneuver and joint force commander, today and in the future...

Although this is more information than many of you may need, I share it with you so you have full situational awareness. With this in mind, I ask and encourage you to join us at MANSCEN, as full partners and teammates in our important work and collaborative enterprise.

COMMAND PHILOSOPHY
(January 2009)

- We are an Army and Nation at war, in an era of persistent conflict, that requires full spectrum Warriors and Leaders.
- What we at MANSCEN do (or fail to do) is crucial to accomplishing the mission and keeping our people alive.
- Think about this every day to prioritize, structure, and focus your efforts.

1. Philosophy:

Our people are precious. They are our centerpiece, focus, and main effort. Let's strive for a positive command climate with caring leaders focused on people: People first, mission always. Let's also strive to be a great organization that is *Built to Last*, with an enduring culture of character, commitment, competence, care, and service to our people and mission.

- I trust you and expect you to take the initiative, lead, and make good decisions. I empower you and grant you permission to take action in accordance with our values and mission and my intent. If in doubt, ask yourself the

following three questions about the decision you are considering: (1) *Is it in the best interests of our people, the unit, and the mission?* (2) *Is it legally and morally right?* (3) *Am I willing to stand up and be accountable for my decision?* If you answer *"Yes"* to all three, don't ask for permission…You already have it…Just do it!

- Good people sometimes make honest mistakes. When that happens, conduct an after-action review (AAR), learn from it, and get better. And share the lessons, so we all get smarter. We are a "learning organization" and believe that mistakes are a natural part of growing and improving. I encourage your candid, honest feedback and advice to help foster an environment for continuous learning and improvement.
- I will give 100%+ effort. There is nowhere I'd rather be and no job I'd rather have. It's a privilege, honor, and blessing to lead this team. Life is short, so enjoy it, live each day to the fullest, have fun, and BE SAFE!

2. Priorities:

- People. We exist to serve our people in an Army at war, so know and care for your flock—Military, Civilians, Families. Welcome and embrace our newcomers properly, inspire our people, and help them grow to their full potential through communication, coaching, and counseling. Set high standards, and conduct tough training. Support Family Readiness Groups (FRGs). Thank and recognize our people appropriately, and provide quality and timely Noncommissioned Officer Evaluation Reports (NCOERs), Officer Evaluation Reports (OERs), and National Security Personnel System (NSPS) ratings and awards. Value people, praise effort, and reward performance. To be *Built to Last*, focus on recruiting and retaining high-quality people—this is everyone's business. Be passionate about what you do, and always set the example. Ensure that you and your people attend a basic combat training (BCT) or a one-station unit training (OSUT) graduation, in order to witness the miraculous transformation of our newest teammates from Civilian to Soldier.
- Focus on our Mission-Essential Tasks: Train, Support, Transform, Take Care Of, and Engage.

3. Expectations:

- Know and enforce safety, discipline, and standards.
- Know your job, do your best, and get better every day. Be an expert in our profession and in your specialty.
- Be fit in mind (intellect, profession, and skills), body (physical fitness and health), heart (passion for your job and life), and spirit (do what's right and live in accordance with your conscience). Live a healthy, balanced life (work and play, professional and personal, present and future). Integrate the Five Fs: Faith, Family, Fitness, Friends, Fun. We need you and your family for the long haul.
- Set the example and live the Army Values. Do what's right, legally and morally, in all situations; treat others with respect and dignity; don't do anything that brings discredit on yourself, the unit, or your Family; do routine things routinely and to standard; don't ignore a problem—look folks in the eye and take corrective action.
- Be a team player. Ask "How may I serve you?" and "What have I done today to improve and enable my people?" Be inclusive; support the team; listen and learn; share [good] ideas willingly (SIW), and steal [good] ideas shamelessly (SIS). Don't complain—if you see something you think we're doing wrong, or believe you know a better way, tell us how you would do it.
- Maintain situational understanding—be alert and informed.
- Communicate transparently up, down, and laterally. Ask "Who else needs to know?" There should be no surprises.
- Enhance communications within and outside of MANSCEN—tell YOUR story and the Army story to our stakeholders and the American people.
- Give me your expert, candid advice—tell me what I NEED to know, NOT what you think I want to hear.
- Live and work with Passion and Energy! Execution – "git 'r done!"
- Be positive! Develop and keep an Attitude of Gratitude in all circumstances.

4. What "Success" Might Look Like:

The Army's best Soldiers and leaders are organized, trained, equipped, and ready to deploy, fight, win—today and in the future. They are experts at their jobs and the basics. They are inspired, with a winning spirit, pride, and initiative—doing the right things in caring for people and enabling the maneuver/joint force commander to win. After leaving MANSCEN and FLW, our people believe that "Serving here was great. I became a better person, Soldier, and leader; grew to my full potential; and made lifelong friends. People took good care of one another. I'd recommend this outfit to a son or daughter, brother or sister, or friend and would serve here again." Success to me is making a positive difference in the lives of others—doing the best you can, with the talent you have, wherever you are—and at the end, "Well done, good and faithful servant."

Thanks for all you do and for who you are. I look forward to serving with each of you!

Major General Martin is Commanding General of the United States Army Maneuver Support Center and Fort Leonard Wood. Previous assignments include Commandant, United States Army Engineer School and Regiment, and MANSCEN Deputy Commanding General for Concepts, Doctrine, and Organizations; Commanding General, United States Army Corps of Engineers Northwestern Division; and Commander, 130th Engineer Brigade, during full spectrum operations in Europe, Kuwait, and Iraq from 2002 – 2004. He holds a bachelor's from West Point, as well as a master's and a doctorate from the Massachusetts Institute of Technology.

Leadership the "Leahy Way"

By Major General Gregg F. Martin

In light of this year being designated "The Year of the NCO," I felt it would be appropriate to reprint an article I wrote for the October-December 2003 issue of *Engineer*. Looking back through my own career, NCOs have been among my greatest teachers, mentors, and friends—from my squad leaders, platoon sergeants, operations sergeants, and first sergeants when I was a junior officer, to my CSMs who have been my closest and most trusted advisors as a brigade commander and general officer.

I truly value and respect the perspectives, assessments, and wisdom that come from the seasoned, calibrated eyeball of an experienced NCO, as well as the absolutely candid, unvarnished, and truthful advice I know I can always trust and count on.

One of the most effective NCO leaders I have ever known was First Sergeant Edwin Leahy, Bravo Company, 79th Engineer Battalion, based in Karlsruhe, Germany, with whom I was privileged to serve from June 1984 to November 1985.

"Top" Leahy ran our company with a spirit, enthusiasm, and competence that was unmatched in my experience. Thanks in large part to his phenomenal leadership, Bravo Company excelled at just about everything. It seemed that all we touched turned to gold. The Soldiers, NCOs, and officers were fired up with a can-do attitude and sense of pride. Our achievements in warfighting readiness, training, maintenance, partnership, sports, and community support were usually rated "best in the battalion." We took care of our people and developed them as future leaders. We had fun and enjoyed our time together, whether in the mud, dust, or snow at Grafenwoehr; on the ranges or troop construction missions; in the field; with our allied partnership units; or on the athletic fields. Although Top and I were truly a "team," there was never any doubt in my mind—or anyone else's—that Top Leahy was "The Man."

Let me describe Top Leahy. First, he was an absolutely powerful presence. He exuded confidence, strength, and charisma. He looked old and mean, with a full head of black hair that he slicked back, 1950s style. He grew up in a rough part of New Hampshire and spoke with a thick Northeastern accent. Except for his tour on "The Trail," he spent all of his Army time down in the trenches, leading engineer Soldiers. He was a hard man.

Top was respected, admired, loved, and feared—all at the same time. He loved the company and his Soldiers, and no one dared to cross him or mess with his company. His ability to quickly cut through the fog and confusion of events, competing priorities, and complexities never ceased to amaze me. It seemed that a hundred things could be going on, then several crises would hit simultaneously, and Top would instantaneously know what to do, how to do it, and in which priority. He would run his solution by me for input and concurrence, then we would proceed from there. Despite his tough exterior, he always took time to explain his logic and thought process. In short, he was a wonderful teacher and coach who was developing and mentoring "his" company commander, just as he had mentored his previous commander, then Captain Bob Derrick.

Although we did not have official family readiness groups (FRGs) in those days, Top and his wife did this informally, but very effectively. Mrs. Leahy was the "Company Mom." She pulled together the NCO, enlisted, and officer wives (the company was all male) on a regular basis to talk business and have fun. The wives became a tight-knit group and took care of their own. Mrs. Leahy was originally from France, so they had many fun excursions across the border for shopping, restaurants, and sightseeing. When the company deployed, or when tragedy struck, this paid off big time. To this day, my wife says that this informal, close group of wives was the most effective FRG she has ever seen, and the beauty of it was that *they all wanted to get together because it was so much fun.*

Top always loved to have fun. He spoke French and German and was the most enthusiastic participant in partnership activities that I have ever seen. We trained with, did exchanges with, and simply had fun with our allies.

Top never saw a partnership event that he didn't like. And I knew that once we went out the door, it was going to be a late night. We built a tremendous amount of good will and truly enhanced our interoperability, which would have paid off in combat if we had ever fought the "big one" in Central Europe. Moreover, he included junior NCOs and Soldiers in these events, which was a huge morale builder and one of his ways of growing leaders.

First Sergeant Leahy with author, left, and his other company commander (Colonel Bob Derrick, who was the Bravo Company, 79th Engineer Battalion, commander before then Colonel Martin) on the right, dedicating the 79th Engineer Battalion plaque at ENFORCE 2002.

Top was strong and robust and had unlimited energy. In terms of technical and tactical competence, there was none better. He expertly ran the company with seeming ease. He knew and could execute every mission flawlessly—from weapons to demolition, to construction, to maintenance. In tense situations, I saw him leap into the fray (even if it was mud or wet concrete)—with spit-shined boots and starched fatigues—and take charge to make sure that the mission got accomplished to standard and that no one got hurt. He taught and coached through his personal example. There was nothing he asked his troops to do that he had not already done or wouldn't do again, and they all knew it.

Top always kept mission accomplishment, concern for his people, and loyalty up, down, and sideways in perfect harmony. He intuitively knew how to do this and was a wonderful coach and advisor to his young commander and lieutenants. Given the operational tempo, the number of competing priorities, and the rapid changes that demanded flexibility and adaptability, I would sometimes hit the frustration level and want to go do battle with folks up at battalion. Top was marvelous in calming me down and channeling my energy into more productive venues (and keeping his Cap'n from "steppin' on it"). On the other hand, when it was time to do battle with higher headquarters, Top let me know, and we often went up to headquarters as a team. And when we did, we rarely lost.

We developed our quarterly training briefs together and briefed as a team from handwritten butcher charts. Top knew exactly how to orchestrate these in such a way that he charmed the battalion commander and command sergeant major and got them to grant Bravo Company much of what we requested. He was brilliant and a true master of how to be totally loyal to me, his Soldiers, the battalion commander, and peers.

What is the relevance of this story? Top Leahy epitomized the NCO Creed. When I think of professional competence—tactical, technical, and leadership—I think of his calibrated and seasoned eyeball, evaluating any situation thrown at him and instantly knowing exactly what to do and how best to handle it. When I think about how to balance mission accomplishment with the welfare of my troops, I often think of Top Leahy. When I think about knowing my Soldiers, keeping them informed, and being fair and impartial, I think of him. Top Leahy showed me how to earn the respect and confidence of my superiors as well as my Soldiers.

In short, Top Leahy lived and modeled—on a daily basis—what it meant to be a professional NCO in the U.S. Army. He and his NCOs in Bravo Company gave me and my officers maximum time to accomplish our duties, because we did not have to accomplish theirs. First Sergeant Edwin Leahy showed me—through his life—what it means to be an NCO, "The Backbone of the Army."

Top Leahy is my example of "what right looks like" in an NCO. I want to thank all our NCOs and their Families for their dedication and selfless service in the defense of our nation. NCOs lead the way!

Major General Martin commanded the Bravo "Bulldogs," 79th Engineer Battalion, from June 1984 to November 1985, in Karlsruhe and Grafenwoehr, Germany. At the time this article was originally written, he commanded the 130th Engineer Brigade, of V (U.S.) Corps and CJTF-7, in Iraq.

Author's Note: First Sergeant Edwin Stanton Leahy (1944-2003) passed away in Rolla, Missouri shortly before this article was written. He was survived by his wife Sandy, four children, one sister, and five grandchildren. His protégés from Bravo Company, 79th Engineer Battalion, include—among a large number of great Americans—Colonel (Retired) Bob Derrick, who went on to command the 307th Engineer Battalion, the 20th Engineer Brigade, and the U.S. Army Corps of Engineers Transatlantic Command; Colonel Clarence "Dave" Turner, who commanded the 14th Engineer Battalion in Iraq, and the Far East District, U.S. Army Corps of Engineers; and CW5 (Retired) Harold DeBerry, who became the Chief Warrant Officer of the Ordnance Regiment. To this day, we are all still in awe of First Sergeant Leahy.

The Maneuver Enhancement Brigade

By Colonel Charles A. Williams and Mr. Joe Crider

> *"The Army is in the midst of a transformation process to move it to modularity—by adopting the six warfighting functions and creating new and special organizations. One of those new and special organizations is the [maneuver enhancement brigade] . . . designed as a [command and control] headquarters with a robust multifunctional brigade staff that is optimized to conduct [maneuver support] operations. Maneuver support operations integrate the complementary and reinforcing capabilities of key protection, movement and maneuver, and sustainment functions, tasks, and systems to enhance freedom of action."*[1]
>
> *—Field Manual (FM) 3-90.31, Maneuver Enhancement Brigade Operations*

The intent of this article is to provide a basic understanding of the capabilities and doctrine of the maneuver enhancement brigade (MEB) and its role in the modular Army. It offers a basic description of the MEB's unique capabilities, relevance to the current force,[2] and importance to the United States Army Maneuver Support Center (MANSCEN).

The evolution of the MEB traces its roots to the Army's transformation initiatives, which identified modularity as one of its primary goals. The Army's goal in developing modular units was to serve the specific needs of combatant commanders by providing tailored forces[3] to support full spectrum operations. The Army's leaders envisioned modularity as a bridge linking current capability requirements with those anticipated for the future. This strategy culminated in the Army's decision to limit its brigade force structure to the following five distinct types:

- Infantry brigade combat teams (IBCTs)
- Heavy brigade combat teams (HBCTs)
- Stryker brigade combat teams (SBCTs)
- Functional brigades
- Multifunctional brigades

As one of five multifunctional brigades, the MEB is the only one designed to manage terrain, a capability it shares with the brigade combat teams (BCTs).

With no antecedents, the MEB represents a unique, and at times somewhat misunderstood, organization. It is a dynamic and multifunctional organization, predicated entirely on tailored forces task-organized for a specific objective. In many ways, it is an organization like no other, offering a tremendous variety of functional and technical depth coupled with significant lethality. The MEB delivers critical complementary and reinforcing capabilities in a flexible and scalable manner that is essential to conducting full spectrum operations. Included in these capabilities is the capacity to deliver any combination of lethal and nonlethal effects.

The MEB's critical missions or key tasks include maneuver support operations, consequence management operations, stability operations, and support area operations. A common thread among each of these missions is the obvious capability requirements of MANSCEN's three proponents—chemical, engineer, and military police.

What the MEB Is

- The MEB is designed as a unique multifunctional command and control (C2) headquarters to perform maneuver support, consequence management, stability operations, and support area operations for the supported force, normally the division.
- The MEB is a bridge across the capability gap between the more capable functional brigades and the limited functional units, such as chemical, biological, radiological, and nuclear (CBRN); engineer; and military police of the BCTs. This headquarters provides greater functional staff capability than BCTs, but usually with less than a functional brigade. The key difference between the MEB and the functional brigades is the breadth and depth of the MEB's multifunctional staff. The MEB provides complementary and reinforcing capabilities. The MEB staff bridges the planning capabilities between a BCT and the functional brigades.
- The MEB is an "economy of force" provider that allows BCTs and maneuver units to focus on combat operations. It directly supports and synchronizes operations across all six Army warfighting functions. For example, economy of force missions might involve support to counterinsurgency or other "terrain owner" missions. The MEB serves a vital economy of force role by freeing the BCT to concentrate on its priorities, when adequately sourced with maneuver formations and other capabilities, such as intelligence, surveillance, and reconnaissance (ISR); fires; information operations; and medical.
- The MEB is similar to a BCT, without the BCT's maneuver capability, providing C2 for an assigned area of operations, unlike other support or functional brigades. Unique staff cells such as area operations, fires, air space, and liaison officer (LNO) assets give the MEB a level of expertise in area of responsibility and terrain management uncommon in a functional brigade.
- The MEB is capable of supporting divisions and echelon above division (EAD) organizations as well.

- The MEB is able to conduct combat operations up to the level of a maneuver battalion when task-organized with a tactical combat force (TCF) or other maneuver forces.

What the MEB Is Not

- The MEB is not a maneuver brigade but is normally assigned an area of operation (AO) and given control of terrain. The MEB's only maneuver is defensive, with very limited offensive maneuver when it employs its reserve (response force or TCF) to counter or spoil threat. When the situation requires, the MEB executes limited offensive and defensive operations, using response forces or TCF against Level II or III threats.
- The MEB is not mainly composed of organic assets, but rather a tailored set of units.
- The MEB is not typically as maneuverable as a brigade. Instead, it is designed to be assigned an AO and C2 with higher headquarters assigned tactical control for security of tenant units.
- The MEB is not designed to conduct screen, guard, and cover operations, which are usually assigned to BCTs.
- The MEB is not a replacement for the functional brigades, especially at EAD.
- The MEB is not a replacement for functional brigades for missions such as counter chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) weapons and threats across the entire operational area; major complex CBRNE or WMD-elimination operations; major focused combat and/or general engineering operations; brigade-level internment/resettlement operations; or major integrated military police operations (each involving three or more battalions); missions requiring increased functional capabilities and staff support, or exceeding the C2 focus of the MEB.
- The MEB is not replaceable by a CBRN, engineer, or military police brigade to perform other functional missions within its own AO or at other selected locations within the division AO.
- The MEB is not a replacement for unit self-defense responsibilities.

MEB Headquarters

Of particular significance to MANSCEN proponents and stakeholders is the MEB's robust headquarters design. Currently numbering nearly 200 Soldiers, noncommissioned officers, warrant officers, and commissioned officers, the MEB headquarters is among the largest in the Army's brigade inventory. The majority of these coded authorizations specifically require chemical, engineer, and military police personnel. To further extend its utility, force developers included authorizations for several other functions—such as fire support coordination and air space management—that lend the MEB unique planning and execution capabilities necessary to support its own AO. The robust planning and C2 capabilities organic to the MEB headquarters serve as its primary attributes, making it ideal for complex missions requiring a flexible response and scalable effects along the spectrum of conflict. For example, the MEB may conduct missions ranging from support such as police or civil engineering to a host nation to support to a division conducting a deliberate river crossing. The relevance and potential of the MEB continues to evolve, particularly in the realm of support to civil operations, as evidenced recently in the requirement for the MEB to provide support to a CBRNE consequence management response force (CCMRF).

Organization

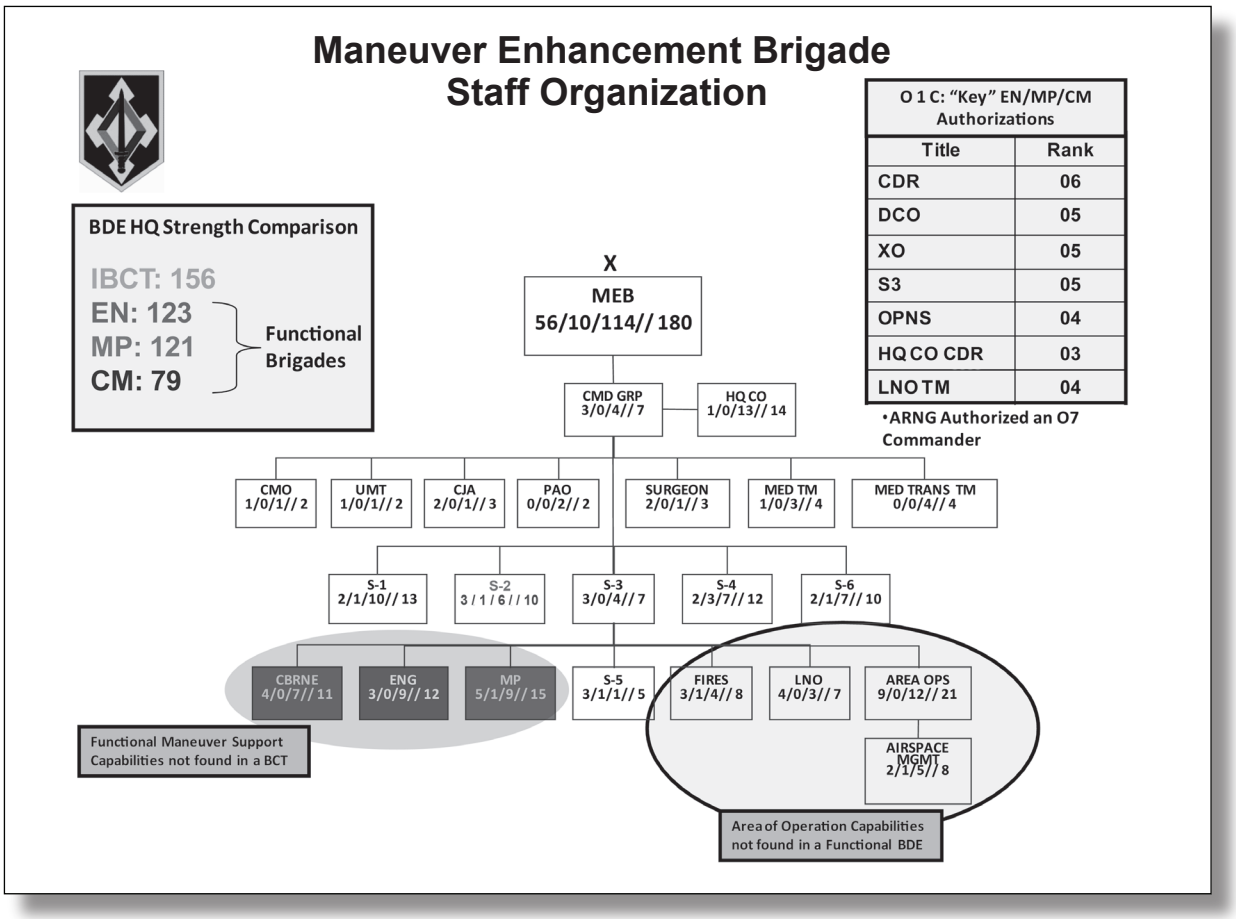
The MEB's central purpose is to provide tailored support to the modular division and corps (supported force) in order to meet wide-ranging requirements in support of full spectrum operations. To support this need, the MEB maintains a robust headquarters design composed of multiple coordinating and special staff cells. Included in the headquarters is a broad range of functional expertise that enables the commander to optimize his capabilities and tailor his response (see figure on page 10).

These cells provide the MEB with unique capabilities such as the following:

- *Fires Cell.* Provides indirect fire coordination (tube, rocket, rotary-wing, or close air support [CAS]); enables the commander to extend protection throughout the support AO; enables mitigation of a host of threats, including support to a TCF (when assigned) in mitigating a Level III threat.
- *LNO Cell.* With permanently assigned LNO personnel, coordinates and establishes liaison vertically with senior and subordinate commands and horizontally with joint, interagency, intergovernmental, and multinational (JIIM) or other agencies located in its AO.
- *Area Operations Cell.* Provides the commander with added flexibility on planning and coordinating activities related to terrain management, while not distracting the operations and training cell or civil affairs cell from its primary focus.
- *Airspace Management Cell.* Coordinates air operations during support area operations or when the MEB is assigned an AO.

The "01C Initiative" is an approved special reporting code that designates seven key positions—commander, deputy brigade commander, executive officer, training officer, operations officer, headquarters company commander, and LNO team chief—within the MEB to be filled by chemical, engineer, or military police officers. The rationale for this initiative extends from the understanding that the majority of the MEB's capabilities involve maneuver support. Limiting these billets to chemical, engineer, and military police officers is a way to assure technical and functional expertise within the seven most critical command and senior staff positions (see figure on page 10).

Beyond the headquarters nucleus, the MEB is a task-organized unit tailored to meet a specific mission requirement. To ensure flexibility, the designers of the MEB structure limited its organic composition to a headquarters, a headquarters company, a network support company, and a brigade support battalion. Though mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC)–dependent, a typical MEB task organization would likely include chemical, engineer, military police, and explosive ordnance disposal (EOD) assets. Also based on METT-TC, it could include air defense artillery, civil affairs, and a TCF.[4]



Doctrine

The doctrine portion will summarize major points contained in FM 3-90.31 and information illustrated in the MEB commanders' briefing. Nearing its final edit, the FM is set for publication in fiscal year 2009. The major tenets of the FM include the following:

- *Maneuver Support Operations.* These operations integrate the complementary and reinforcing capabilities of key protection, movement and maneuver, and sustainment functions, tasks, and systems to enhance freedom of action. For example, these key tasks may include area security, mobility, and internment and resettlement operations. Maneuver support operations occur throughout the operations process of planning, preparing, executing, and assessing. The MEB conducts maneuver support operations and integrates and synchronizes them across all the Army warfighting functions in support of offensive and defensive operations and in the conduct or support of stability operations or civil support operations.[5]
- *Combined Arms.* The MEB is a combined arms organization that is task-organized based on mission requirements. The MEB is primarily designed to support divisions in conducting full spectrum operations. It can also support operations at EAD, including corps, theater, Army, joint, and multinational C2 structures. Still further, it is ideally suited to respond to state and federal agencies in conducting civil support operations in the continental United States. The MEB has limited offensive and defensive capabilities in leveraging its TCF (when assigned) to mitigate threats within its AO.[6]
- *Support Area Operations.* The MEB conducts support operations within the echelon support area to assist the supported headquarters to retain freedom of action within the areas not assigned to maneuver units. When conducting support area operations, the MEB is in the defense, regardless of the form of maneuver or the major operation of the higher echelon. Support area operations include the need to—
  - ► Prevent or minimize interference with C2 and support operations.
  - ► Provide unimpeded movement of friendly forces.
  - ► Provide protection.
  - ► Conduct operations to find, fix, and destroy enemy forces or defeat threats.
  - ► Provide area damage control.[7]
- *Terrain Management (conducted in the support area).* The MEB's tailored capabilities enable it to assume many of the missions formerly performed by an assortment of organizations in the division and corps rear, such as rear area operations and base and base cluster security. Usually assigned its own AO to perform most of its missions, the MEB can also perform missions outside its AO. Normally, the MEB's AO is the same as the supported echelon's support area. Within its AO, the MEB can perform a host of missions, though it is better suited to perform one or two missions simultaneously

than several at the same time. Some of the missions assigned to an MEB within its AO include movement control; recovery; ISR and stability operations. The MEB defends the assets within its AO, including bases and base clusters. Outside of its AO, the MEB can provide military police, EOD, or CBRN support to the supported commander.[8]

- *Movement Corridors*. One of the ways that the MEB performs protection missions is by establishing movement corridors to protect movement of personnel and vehicles. The MEB provides route security and reconnaissance and defends lines of communication. The figure on page 10 offers a greater overview of the MEB's mission capabilities, depicting its core capability mission-essential tasks (CCMETs) and the supporting task groups.
- *Interdependencies.* The MEB, like all the other modular brigade structures, relies on others for some of its support. When needed, the MEB must leverage fire, medical, aviation, and intelligence support from adjacent functional or multifunctional brigades. As the likely landowner of the support area, the MEB will not only have to provide support throughout the division area of responsibility but also to the other modular support brigades residing within the support area as part of its support area operations mission.

MEB Limitations

The MEB is not a maneuver organization. Although it harnesses sufficient C2 and battle staff personnel to employ a TCF in a limited role (when assigned), it does not seize terrain and it does not seek out a Level III threat. It is important that MEB commanders and staff can clearly articulate the differences between the MEB, the other modular support brigades, the functional brigades, and the BCTs.

The Way Ahead

The future of the MEB appears very positive. Its capabilities are relevant and indispensable to combatant commanders conducting full spectrum operations. The MEB receives frequent accolades from an expanding chorus of general officers. Just recently, General William S. Wallace, then commanding general of the United States Army Training and Doctrine Command, and Major General Walter Wojdakowski, Chief of Infantry and commander of the Maneuver Center of Excellence at Fort Benning, Georgia, strongly supported the need for more MEBs. Their belief is that the current and future operational environments—increasingly asymmetrical and complex—require more MEBs. In sharing their experiences from the major combat operation phase of Operation Iraqi Freedom, they remarked that an MEB or two could have played a key role during the march to Baghdad. Their assessment was that the MEB is uniquely configured to command and control all the maneuver support capabilities required to support Army operations. During the early phases of Operation Iraqi Freedom, all the critical maneuver support functions now resident in MEBs were managed in composite fashion. Most frequently, functional or maneuver brigades would assume these functions as an additional mission. Performing these vital missions was necessary to ensuring that the lines of communication remained open and the rear area remained secure. Typically, units performed maneuver support operations and support area operations missions as a secondary effort, taking their focus away from their primary mission—the march to Baghdad.

The MEB's unique design ensures its place in the Army's force structure to provide maneuver support to division and corps for the current force and for years to come. A central concept of the modular force is for each of the modular support brigades to provide seamless support to the supported commander. For its part, the MEB's tailored design assures that it can provide all essential maneuver support functions to the supported commander. While the MEB is only one part of a division force package, it too is required to ensure seamless support to the division across the spectrum of conflict. At present, there are 23 MEBs in the total force—4 in the Active Army, 3 in the United States Army Reserve, and 16 in the Army National Guard. We began to activate MEBs in 2006 and will continue to activate them through 2012. Currently, 14 MEBs have been activated and several have already deployed.

The MANSCEN challenge now is to develop a culture of leaders who can visualize, describe, and direct the many capabilities resident in the MEB to support a transforming Army.

Colonel Williams assumed duties as the TRADOC Capability Manager–Maneuver Support in September 2007. His most recent assignments include Deputy Brigade Commander, 16th Military Police Brigade (Airborne), Fort Bragg, North Carolina, and Baghdad, Iraq; Commander, 342d Military Police Battalion; Director of Emergency Services and Chief, Command and Tactics Division, United States Army Military Police School, Fort Leonard Wood, Missouri. He holds a master's in counseling and leader development from Long Island University, is a graduate of the Command and General Staff College, and is a Senior Service College selectee. He was selected for brigade command in 2007.

Mr. Crider is the maneuver support integrator for the TRADOC Capability Manager–Maneuver Support. Previously, he served as a concepts analyst for the Operational and Strategic Concepts Development Team, Concept Development Division, Maneuver Support Center's Capability Development and Integration Directorate (CDID), and as the senior doctrine analyst for the Directorate of Training and Leader Development, United States Army Military Police School. A retired infantryman, he is a graduate of the Command and General Staff College and holds masters' in management and in human resource development.

Endnotes

[1] FM 3-90.31, *Maneuver Enhancement Brigade Operations* (Introduction), 26 February 2009.

[2] "Our Army at War: Relevant and Ready," *Soldiers Magazine*, January 2004.

[3] Field Manual Interim (FMI) 3-0.1, *The Modular Force*, 28 January 2008.

[4] FM 3-90.31.

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] Ibid.

Weapons of Mass Destruction-Civil Support Team: *The Title 32 Initial Response Force*

By Lieutenant Colonel Christian M. Van Alstyne and Mr. Stephen H. Porter

Since well before the attacks of 11 September 2001, we have recognized the threat posed by weapons of mass destruction (WMD) attacks on the U.S. homeland. A review of available information reveals a wide variety of asymmetric threats across the spectrum. These include attacks and other events where an adversary may use or threaten to use chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) weapons against the United States. Attacks on U.S. embassies abroad, the sarin gas attacks on the Tokyo subways, the bombing of the Alfred P. Murrah Federal Building in Oklahoma City, and other incidents illustrate the reality of the threat. While security efforts have successfully prevented a recurrence of further terrorist strikes in the United States, it is only prudent to be prepared for some level of success on the part of our enemies. In addition to CBRNE counterproliferation and elimination operations, it is likely that military support of consequence management (CM) efforts will be required.

Beyond simply providing boots on the ground, the Department of Defense (DOD) can dependably bring to bear substantial command and control, logistical, and technical resources in response to requests for federal assistance. Historically, such response had been organized on an ad hoc basis, with no specific units being committed to homeland CM missions. However, a review of our ability to respond to disasters and WMD eventually led to several important pieces of legislation in the mid-1990s. The requirement for timely, specialized, and effective response to a WMD event, combined with the expectations put forth under the National Response Framework, points to a clear need for a well-orchestrated military CM response. There are several layered components of DOD support to civil authorities. This is the first of a series of articles designed to address the layered support to civil authorities and will detail the initial response force, which comes from the Title 32 forces—the WMD-Civil Support Teams (CSTs). Title 32 and Title 10 response assets will be described in separate articles in this series.

Background

In May 1998, President Clinton announced that the nation would do more to protect its citizens against the growing threat of chemical and biological terrorism. As part of this effort, DOD would form 10 teams to support state and local authorities in the event of an incident involving WMD.

The WMD-CSTs were established to provide military-unique capabilities, expertise, and technologies to assist state governors to prepare for and respond to CBRNE incidents. Teams must complement and enhance, not duplicate, state emergency management capabilities. They must be able to deploy rapidly to assist a local incident commander in determining the nature and extent of an attack or incident, provide expert technical advice on CBRNE operations, and help identify and support the arrival of follow-on civilian or military response agencies from the state or federal level. They are joint units that can consist of Army National Guard and Air National Guard personnel.

Mission

The mission of WMD-CSTs is to—

- Assess current and potential hazards to personnel, animals, and selected critical infrastructure features from identified agent substances.
- Advise civil authorities on initial casualty medical management and casualty minimization measures.
- Assist arrival of additional state and federal assets to help save lives, prevent human suffering, and mitigate property damage.

The WMD-CSTs are able to deploy rapidly, assist local first responders in determining the nature of an attack, provide medical and technical advice, and pave the way for the identification and arrival of follow-on state and federal military response assets. Using a technologically advanced operational fleet, the CSTs can respond quickly, accomplish their mission, and blend in with civilian vehicles at the scene. They provide initial advice on what the agent may be; assist first responders in that detection assessment process; and serve as the first military responders on the ground so that if additional state or federal resources are called into the situation, they can act as an advance party to provide liaison with Joint Task Force Civil Support. As experts in CBRNE defense operations, they can mitigate the consequences of any hazardous event, whether natural or man-made. WMD-CST response in a major CM event is illustrated in Figure 1.

Current Configuration

These National Guard teams provide DOD's unique expertise and capabilities to assist state governors in preparing for and responding to CBRNE incidents as part of a state's emergency response structure. Each team consists of 22 highly skilled, full-time National Guard members who are federally resourced, trained, and exercised, employing federally approved CBRNE response doctrine. Figure 2, page 14, illustrates the WMD-CST structure.

These units derive their origins in guidance from Congress, which stated the need to "establish and equip small organizations in each of the 44 states not receiving an initial Rapid Assessment and Initial Detection (RAID) element in 1999 to provide limited chemical/biological response capability."[1] With RAID teams renamed WMD-CSTs, the first 10 teams were based in Colorado, Georgia, Illinois,

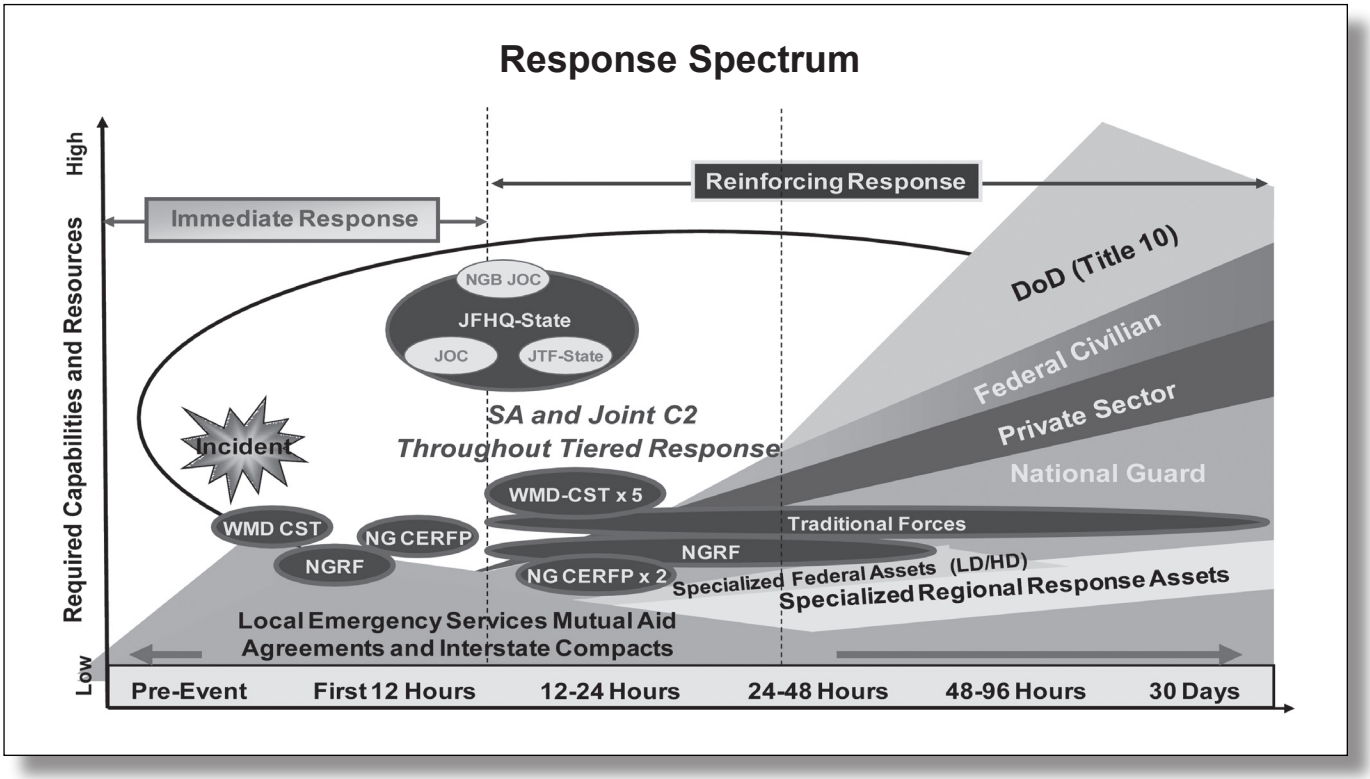


Figure 1

California, Massachusetts, Missouri, New York, Pennsylvania, Texas, and Washington. One team was fielded in each of the 10 Federal Emergency Management Agency regions. There is now at least one WMD-CST in each of the 50 states, plus the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. With Florida and New York receiving additional CSTs, the National Guard will soon have 57 teams.

CST Capabilities

In addition to being able to execute the previously described mission, CSTs are also trained and equipped to—

- Detect and completely characterize an unknown sample of suspected WMD agents/substances present at an incident site (see Figure 3, page 15).
- Provide onsite mobile analytical platform to perform analysis and characterization of unknown samples and provide assessment through reachback capability to designated state and federal agencies with additional technical expertise.
- Determine the current contaminated area and assess current and potential hazards to personnel, animals, and selected critical infrastructure features resulting from identified agent/substance presence.
- Advise civil authorities on initial casualty medical management and casualty minimization measures.
- Advise civil authorities as to initial agent/site containment and mitigation measures.
- Advise civil authorities about the capability of additional support assets and assist with requests for such assets.
- Provide incident-related technical and situational awareness information to and from nationwide sources while at home station, en route, and on-site through organic communications capabilities.
- Link to and augment civil responder communications systems, as required. Maintain real-time secure and nonsecure operational communications with higher headquarters and reachback network.
- Provide decontamination for assigned personnel and equipment and advise incident commander on setup of a decontamination site.
- Provide preventive medicine, medical surveillance, and emergency medical technician-level medical care for assigned personnel only.
- Rapidly deploy by organic vehicles and/or nonorganic transportation assets such as air, rail, road, or water.
- Provide command and control of CST elements and limited augmentation assets and coordinate administrative and logistic support for CST.
- Participate in advanced planning, coordination, and training processes with potential supported or supporting local, state, and federal agencies; other CSTs; and/or DOD response elements.
- Execute the listed capabilities according to applicable state and federal laws within a state or territory or at a continental U.S. military installation, when requested.

Maneuver Support Perspective

The United States Army Maneuver Support Center (MANSCEN) at Fort Leonard Wood, Missouri, received specified proponency in a memorandum from the Army Deputy Chief of Staff for Operations and Plans in June 2002. In 2003, MANSCEN, in partnership with the United States Army Chemical, Biological, Radiological, and Nuclear School and the National Guard Bureau (NGB), chartered an integrated concept development team (ICDT) to streamline support for the newly formed CST program. The ICDT and proponency enable MANSCEN to perform the functions of a branch proponent as listed in Army

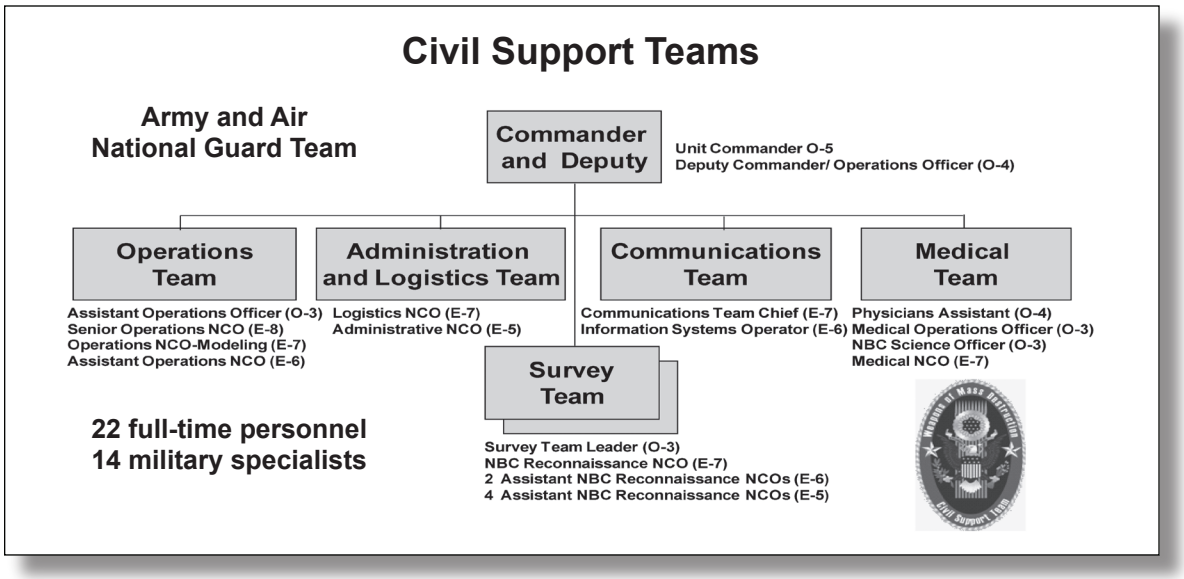


Figure 2

Hapsite Gas Chromatograph/Mass Spectrometer

- Analytical instrument (gas chromatograph/ mass spectrometer)
- 35 pounds
- National Institute of Standards and Technology - 86K Chemical Library
- 4-hour downrange capability

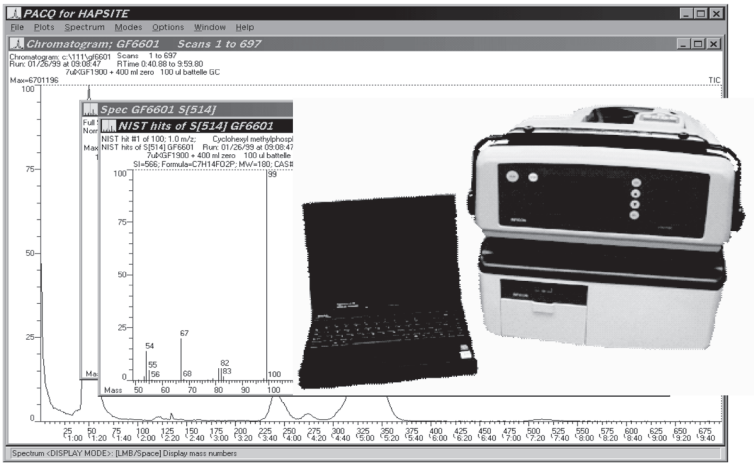


Figure 3

Regulation (AR) 5-22, *The Army Force Modernization Proponent System*,[3] to include development and documentation of the following:

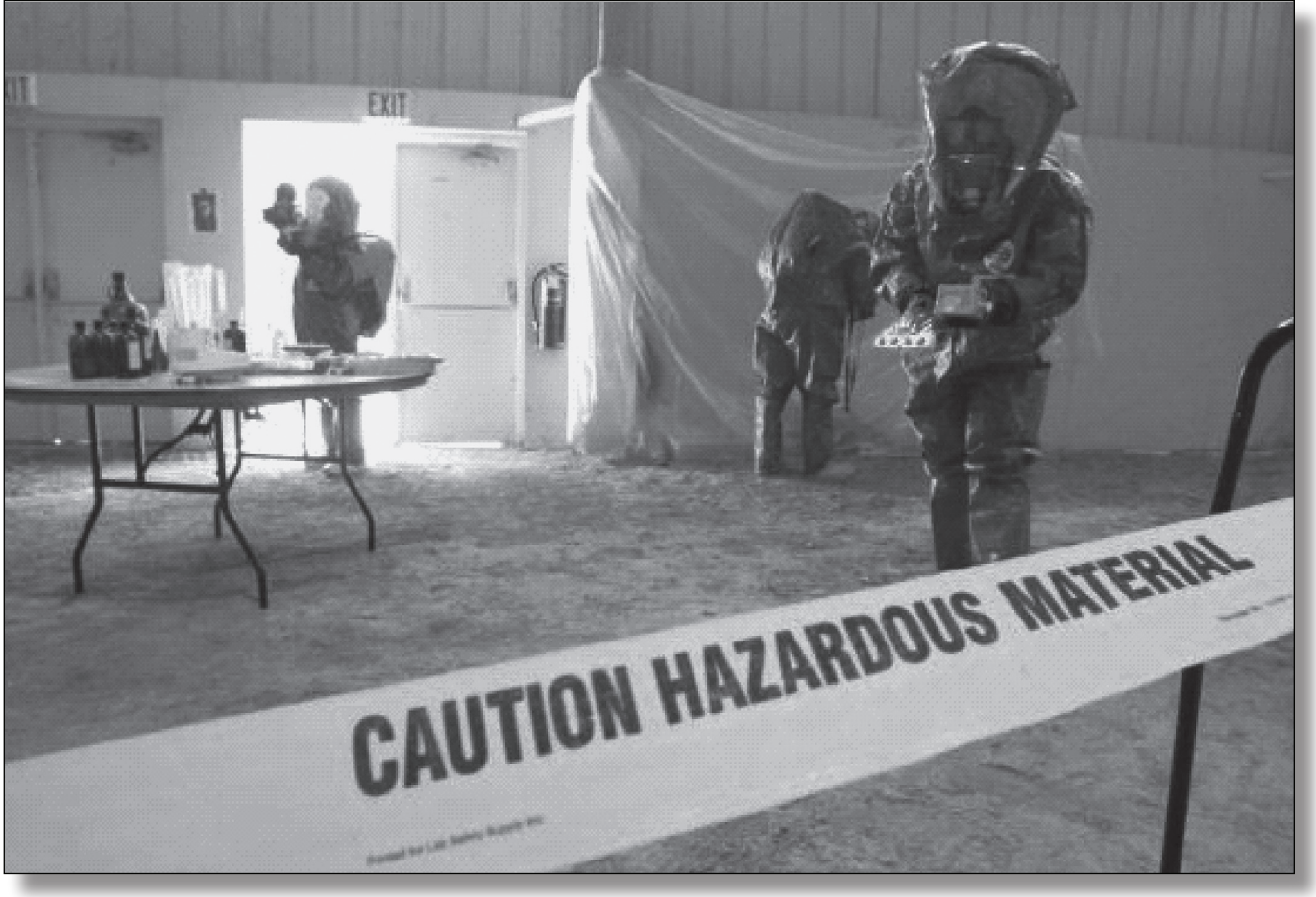
- Concepts
- Doctrine
- Tactics, techniques, and procedures
- Organizational designs
- Materiel requirements
- Training programs
- Training support requirements
- Manpower requirements (except as provided in AR 600– 3, *The Army Personnel Proponent System)*[4]
- Coordination of proponent initiatives with user units

In January 2001, a controversial DOD inspector general audit identified a number of problems with how the WMD-CST program functioned. For example, personnel assigned to a WMD-CST were receiving training according to the NGB training matrix, using more than 35 commercial/ government vendors. The Civil Support Skills Course was established at Fort Leonard Wood, Missouri, in 2003 to replace the previous Emergency Assessment and Detection Course and provide training for all CST members before they could assume positions on the teams. Now highly regarded across DOD, the course accomplished in 8 weeks what had taken months to complete, greatly benefiting CST training readiness. In this accelerated training, Soldiers and Airmen CBRN responders still receive certifications recognized by their civilian counterparts. As directed by the Vice Chief of Staff of the Army, MANSCEN and NGB were able to streamline CST program support using the following standard Army business practices:

- Systems approach to training (SAT) process
- Training validation at a structure and manning decision review
- Written requirements documents
- Review of the organizational design

Today, through the use of a community of practice, we have resolved most of the issues identified in the audits and have established mechanisms for continuous improvement and feedback. A 2005 Government Accounting Office audit and report on the CSTs found a high state of readiness, indicating that the efforts by the NGB, MANSCEN and the United States Army Chemical, Biological, Radiological, and Nuclear School had remedied initial program shortcomings. Due to the new and evolving nature of the CST mission and the fact that CST members must be trained to the level of their civilian counterparts, much of their training was redundant and required significant time to complete. That training lasted 8 months, and the Soldiers and Airmen (the teams are about 25 percent Air National Guard) are only on station for 36 months before they come "off contract."

January 2009 marked the 10th anniversary of the original 10 RAID teams—now CSTs—arriving at what was then called the United States Army Chemical School for training at Fort McClellan, Alabama. In what many consider a forward-thinking "evolution" in military affairs, our DOD forces successfully created 55 highly trained and capable CBRN response units ready to support America's responders and communities. Representing 90 percent of DOD's immediate CBRN response capability, and trained to both civilian and military standards, the CSTs represent a CBRN and CM capability found nowhere else in the world. The success of the CST program can be



Hot Zone Detection and Sample Collection Capability

found in congressional action calling for a federal WMD response capability, the efforts of the ICDT partners in supporting a new program, and the dedication of CST Soldiers and Airmen standing ready over the last decade to support responders in hundreds of CBRN and CM responses.

Lieutenant Colonel Van Alstyne serves as Chief Director, Intelligence Branch, Combat Refresher Team, Center for Army Tactics, Fort Leavenworth, Kansas. Previously, he served as Deputy Assistant Commandant-National Guard, MANSCEN, and as the commander, deputy commander, and operations officer of the 103d Civil Support Team-Weapons of Mass Destruction, Alaska Army National Guard, from June 2000 to March 2007. He is a graduate of the United States Army Command and General Staff College, Intelligence Officers Advanced Course, Combined Logistics Officers Advanced Course, Infantry Officer Basic Course, and courses required for the civil support team program. He holds a bachelor's from the University of Washington at Seattle and a master's from Central Michigan University, Mount Pleasant.

Mr. Porter is the Chief, Weapons of Mass Destruction-Civil Support Team Division, Homeland Security Office, MANSCEN. As an enlisted Soldier, he served with the 5th United States Army Special Forces Group in Vietnam. As a warrant officer, he taught the Engineer Officer Basic and Advanced Courses at the United States Army Engineer School, Fort Leonard Wood, Missouri, before retiring in 1994. He holds a bachelor's in industrial engineering from Southern Illinois University at Carbondale and a master's in business administration from the University of La Verne, California.

Endnotes

[1] United States Army National Guard and Reserve Soldiers are normally activated to full-time duty in one of three ways: Title 10, Title 31, or State Active Duty (SAD). Under Title 10, a Servicemember is a full-time Soldier who is subject to the Uniform Code of Military Justice (UCMJ), receives federal benefits, and is protected by all federal laws such as the Uniformed Services Employment and Reemployment Rights Act of 1994 and the Servicemembers Civil Relief Act of 2003. Servicemembers activated under Title 31 remain under the command of their state governor and adjutant general, but are paid by the federal government. They cannot exercise command over Title 10 Soldiers, are not subject to the UCMJ, and have only limited protection under federal laws. SAD Soldiers are under state command only and are paid by their state. They are not subject to the UCMJ, receive no federal protection, and can exercise no command over federal Soldiers.

[2] House Report 105-825, "Domestic Preparedness Against Weapons of Mass Destruction," from *Making Omnibus Consolidated and Emergency Supplemental Appropriations for Fiscal Year 1999*, Library of Congress.

[3] AR 5-22, *The Army Force Modernization Proponent System*, 6 February 2009.

[4] AR 600-3, *The Army Personnel Proponent System*, 28 November 1997.

The Joint Capabilities Integration Development System:

How Do We Start and Why Do We Use It?

By Mr. James Harshbarger

This is the first in a series of articles about the Joint Capabilities Integration Development System (JCIDS) and is designed to provide an understanding of the JCIDS practices and the supporting processes and documentation that lead through the procedure.

The JCIDS process is just over four years old and is changing rapidly to keep pace with the needs of combatant commanders and Soldiers. While some people might tell you it is a very boring field to work in, I would beg to differ. What could be more exciting than working on the documents that will give U.S. Soldiers the advantage on both current and future battlefields? The process may take three to six years to field, but the excitement is never-ending. The following paragraphs provide a quick snapshot of how the process works.

The JCIDS process leverages commercially available products while promoting further development of joint future concepts and integrated architectures. The JCIDS process (see figure below)—which includes the doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) analysis and capabilities-based assessment (CBA)—identifies capability gaps and redundancies, assesses the risk and priority of the gaps, and identifies an approach (materiel and/or nonmateriel), or combination of both approaches, to address these gaps. This analysis process should leverage the abilities and knowledge of all Department of Defense components and other resources and contribute appropriately to the joint force commander's ability to most effectively deliver the desired effects. JCIDS documents include the following:

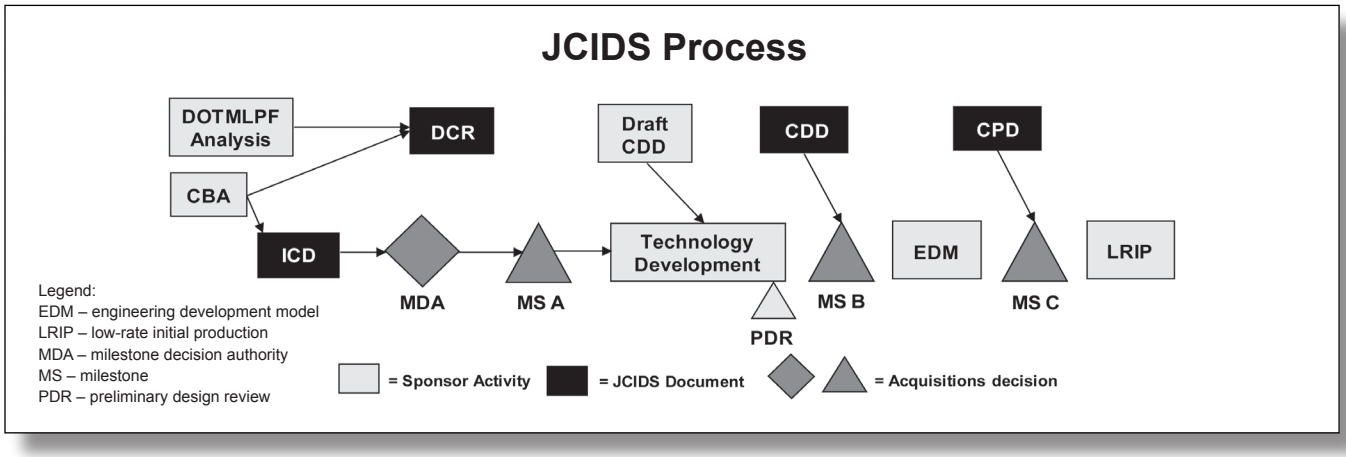
- Joint capability document (JCD)
- Initial capabilities document (ICD) (which identifies gaps)
- Capability development document (CDD)
- Capability production document (CPD) (which supports materiel solutions)
- Document change request (DCR) (which supports nonmateriel solutions)

Throughout the process, proposals are evaluated to ensure that they are consistent with the joint force envisioned in strategic policy guidance documents, joint future concepts, integrated architectures, and capability roadmaps at each milestone or gate (see figure below). For the Army, there are four levels of staffing to ensure that this process is adhered to:

- Worldwide staffing
- United States Army Training and Doctrine Command (TRADOC) staffing
- Headquarters, Department of the Army, one- and three-star staffing
- Joint level staffing (Phases 1 and 2)

The next article will explain the levels of staffing as addressed in Chairman of the Joint Chiefs of Staff Instruction 3170.01F and Chairman of the Joint Chiefs of Staff Manual 3170.01C.

Mr. Harshbarger is the Chief, Quality Control Branch, Requirements Determination Division, Capability Development and Integration Directorate. A retired engineer command sergeant major, he has been working the JCIDS process for materiel requirements documents for more than five years.



MANSCEN Capability Development and Integration Directorate: *A Force of Change*

By Mr. Vernon L. Lowrey

In October 2005, General William S. Wallace, then Commanding General of the United States Army Training and Doctrine Command (TRADOC), directed an assessment to identify and implement actions to adapt processes, relationships, and organizations to the realities of a dynamic joint operating environment. Through this effort, General Wallace approved several Center of Excellence (CoE) models that restructure TRADOC centers and schools to leverage Base Realignment and Closure Commission decisions; posture TRADOC to be more effective and to support the Army in transition; and execute doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) integration of the future force. Each CoE is to have a Capability Development and Integration Directorate (CDID) to lead the capability development process. The current TRADOC CoEs are—

- Maneuver Support—Fort Leonard Wood, Missouri
- Sustainment—Fort Lee, Virginia
- Maneuver—Fort Benning, Georgia
- Fires—Fort Sill, Oklahoma
- Signal—Fort Gordon, Georgia
- Aviation—Fort Rucker, Alabama
- Intelligence—Fort Huachuca, Arizona
- Basic Combat Training—Fort Jackson, South Carolina

TRADOC is beginning to develop a new CoE for Future Combat System capability development and training integration at Fort Bliss, Texas. The Combined Arms Center at Fort Leavenworth, Kansas, recently formed a CDID from the existing Combined Arms Center Battle Command Office.

The Maneuver Support CoE is now at full operating capability. The remainder of this article will focus on the Maneuver Support Center (MANSCEN) CDID.

MANSCEN CDID Mission

The CDID develops maneuver support-related concepts and determines maneuver support, chemical, engineer, and military police organization and materiel requirements through capabilities-based assessments and experiments to define DOTMLPF-integrated combined arms capabilities to assure the mobility, freedom of action, and protection of Army forces.

The MANSCEN CDID consists of a headquarters cell and the following subordinate elements:

- Concept Development Division (CDD)
- Requirements Determination Division (RDD)
- Rapid Transition Division (RTD)
- Maneuver Support Battle Lab (MSBL)
- TRADOC Capability Manager (TCM)–Geospatial
- Explosive Ordnance Disposal (EOD) Fusion Division

The CDID normally operates using a matrix management approach to gather necessary competencies or by forming teams to solve problems or undertake tasks.

Oversight of the CDID headquarters is accomplished through the MANSCEN governance and capability development prioritization process by deputy commanding generals (DCGs) focused on various aspects of CDID operations to ensure full DOTMLPF integration across MANSCEN, as shown in Figure 1, page 19. Each DCG sits on the MANSCEN executive board of directors with the MANSCEN commanding general. The DCG for MANSCEN is a Senior Executive Service (SES) civilian responsible for day-to-day operations of the CDID. The DCG for Concepts, Doctrine, and Organization (CD&O) is responsible for oversight across MANSCEN for each of these areas. Concepts and organization are primarily the work of the CDID CDD, while doctrine efforts are worked by the MANSCEN Directorate of Training. Currently, the commandant of the United States Army Engineer School also serves as the DCG for CD&O; the commandant of the United States Army Chemical, Biological, Radiological, and Nuclear School also serves as the DCG for Materiel and Technology (M&T).

CDID Headquarters

The CDID headquarters is responsible for vertical and horizontal integration and synchronization within the CDID; MANSCEN organizations; TRADOC Army Capabilities Integration Center (ARCIC); other TRADOC CDIDs; Headquarters, Department of the Army (HQDA); joint services; and external organizations for its core functions. The CDID complies with the Joint Capabilities Integration and Development System (JCIDS) as shown in Figure 2, page 19, going from national security strategies through conceptual, experimental, and science and technology (S&T) efforts to develop DOTMLPF solutions using detailed analysis.

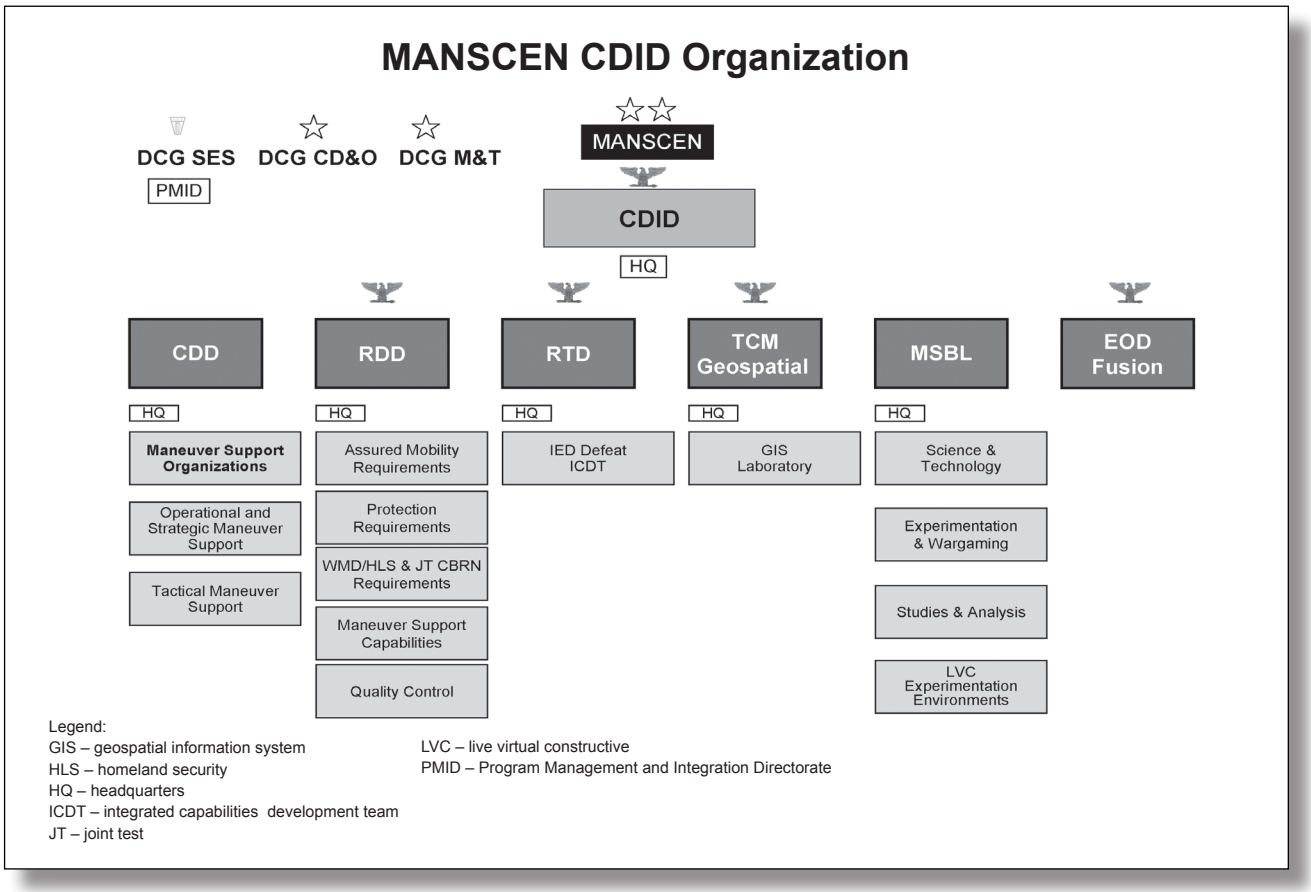


Figure 1

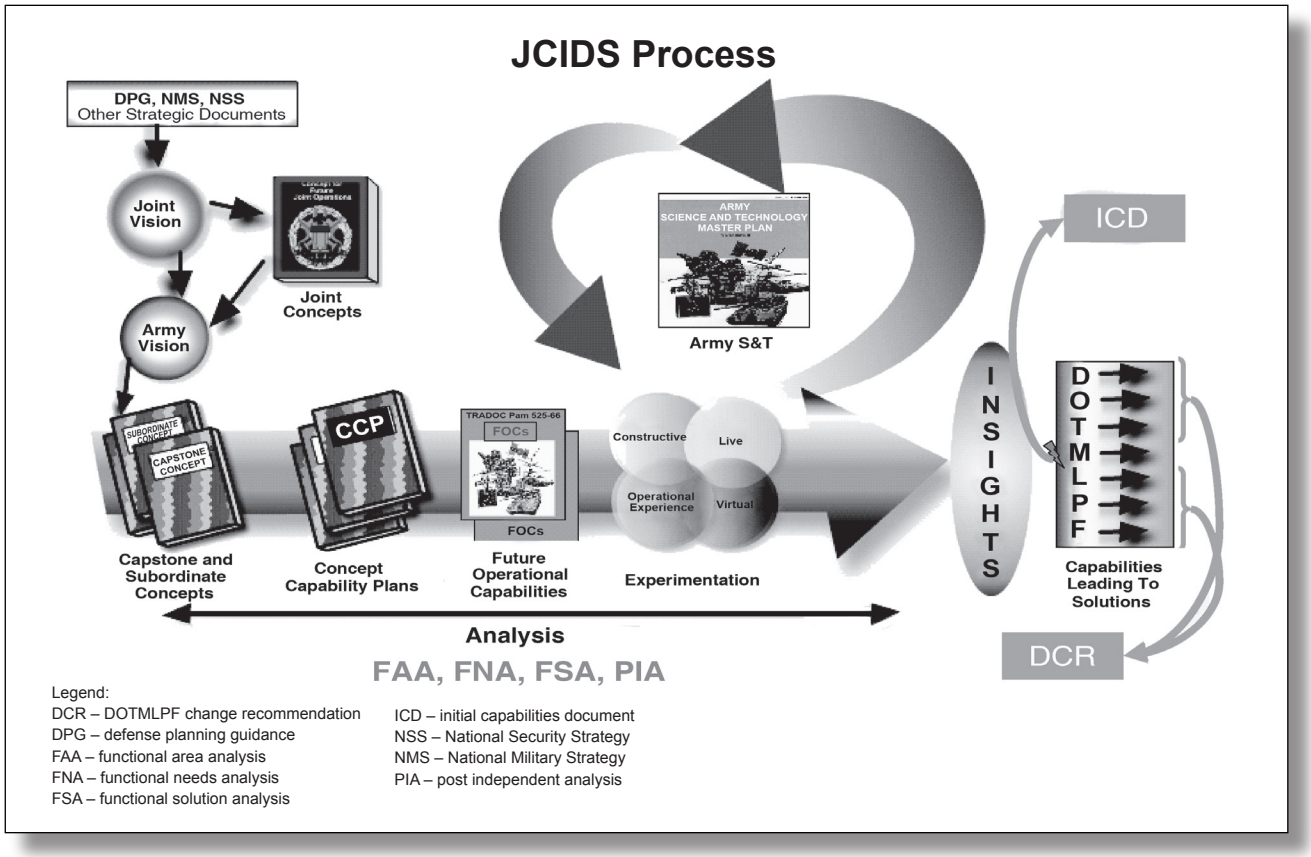


Figure 2

These JCIDS efforts normally take several months to years, with acceleration being possible when required.

Concept Development Division

The CDD leads the development of concepts that provide the context for assessment and analysis within the JCIDS process. These concepts illustrate how current and future forces will operate; describe the capabilities required to carry out a range of military operations against adversaries in the expected joint operational environment; and demonstrate how a commander, using military art and science, might employ these capabilities to achieve desired effects and objectives. The CDD Operational Maneuver Support Concepts Branch and Tactical Maneuver Support Concepts Branch perform these functions. The CDD also leads the development of organizational requirements and solutions through the Maneuver Support Organizations Branch. These organizational efforts include development of maneuver support and proponent tables of organization and equipment (TOEs), basis of issue plans, force design updates, and support to the Total Army analysis processes.

Requirements Determination Division

The RDD serves as the joint chemical, biological, radiological, and nuclear (CBRN) and Army's warfighter representative for all maneuver support, assured mobility, combating weapons of mass destruction (CWMD), and protection material requirements in order to ensure mobility, freedom of action, and protection of the supported force. The RDD is the largest division in the CDID, with the following branches:

- Assured Mobility
- Protection
- Joint CBRN and WMD
- Maneuver Support
- Quality Control

The RDD performs key roles in the JCIDS materiel acquisition documentation coming out of initial capabilities documents (ICDs) developed through capability needs analysis, primarily in the development of capability development and capability production documents. RDD also develops systems training plans for each materiel solution. The Assured Mobility Branch focuses primarily on engineer-related equipment. The Protection Branch works primarily with military police and other fixed-site protection materiel developments. The Joint CBRN and WMD Branch works joint materiel requirements for all services as the Army lead through the Joint Requirements Office for CBRN Defense at the Pentagon. (Not shown in the figure is a joint CBRN threat office attached to RDD from the Joint Requirements Office.) The Maneuver Support Branch works with materiel requirements that cross all MANSCEN proponents, such as battle command, military working dogs, Future Combat Systems, Soldier as a System, and hazard marking. The Quality Control Branch serves as a single point of contact for all JCIDS documentation efforts with TRADOC, HQDA, and the joint staff and monitors the processing and quality of all JCIDS documents initiated by, or provided to, MANSCEN for review and action.

Rapid Transition Division

The RTD leads MANSCEN's efforts to rapidly identify, develop, integrate, and provide maneuver support forces with DOTMLPF solutions to fill or mitigate capability shortfalls in the functional areas of improvised explosive device (IED) defeat, asymmetric warfare, protection, and CBRN defense. The RTD oversees the IED defeat integrated concept development team (ICDT) for TRADOC and HQDA. RTD also monitors current Army and joint operational need statements from operational theaters and determines if newly procured capabilities are enduring and need to be rapidly acquired through the rapid acquisition process as shown in Figure 3, page 21. RTD is the MANSCEN entry point for the Army's Capabilities Development for Rapid Transition program and accelerated capability developments.

Maneuver Support Battle Lab

The MSBL conducts experimentation and analysis that support capability developments and influence science and technology to help ensure the mobility, protection, and freedom of action of Army and joint forces.

- The Experiment and Wargaming Branch serves as the focal point with ARCIC and other proponents for primarily virtual and constructive experimentation. In fiscal year 2009, MSBL will conduct two directed major experiments for ARCIC in protection strategy and CWMD, including an examination of the 20th Support Command as a potential Joint Task Force-Elimination headquarters.
- The Studies and Analysis Branch provides the analytic expertise underpinning of MSBL experimentation and other requested study efforts by working closely with the TRADOC Analysis Command.
- The Live, Virtual, Constructive Environment Branch supports MSBL experimentation and studies with facilities, software, and hardware. This branch oversees a live experimentation facility on Fort Leonard Wood and the state-of–the-art MANSCEN Digital Experimentation Center, which is connected with all other TRADOC battle labs and simulation centers through the secure Battle Lab Constructive Simulation Environment.
- The Science and Technology Branch is the focal point for S&T developments with ARCIC, Army, joint, and interagency laboratories. The CDID has several attached laboratory liaison officers and staff to assist with S&T coordination, including the Army Research Laboratory (ARL), Armaments Research and Development Center, Night Vision and Electronic Sensors Directorate, Engineer Research and Development Center, and Natick Soldier Center/Edgewood Chemical and Biological Center. The MSBL shares S&T developments with capability developers, program managers, industry, and government labs. As part of reach-out-to-industry, MSBL works in coordination with ARL and

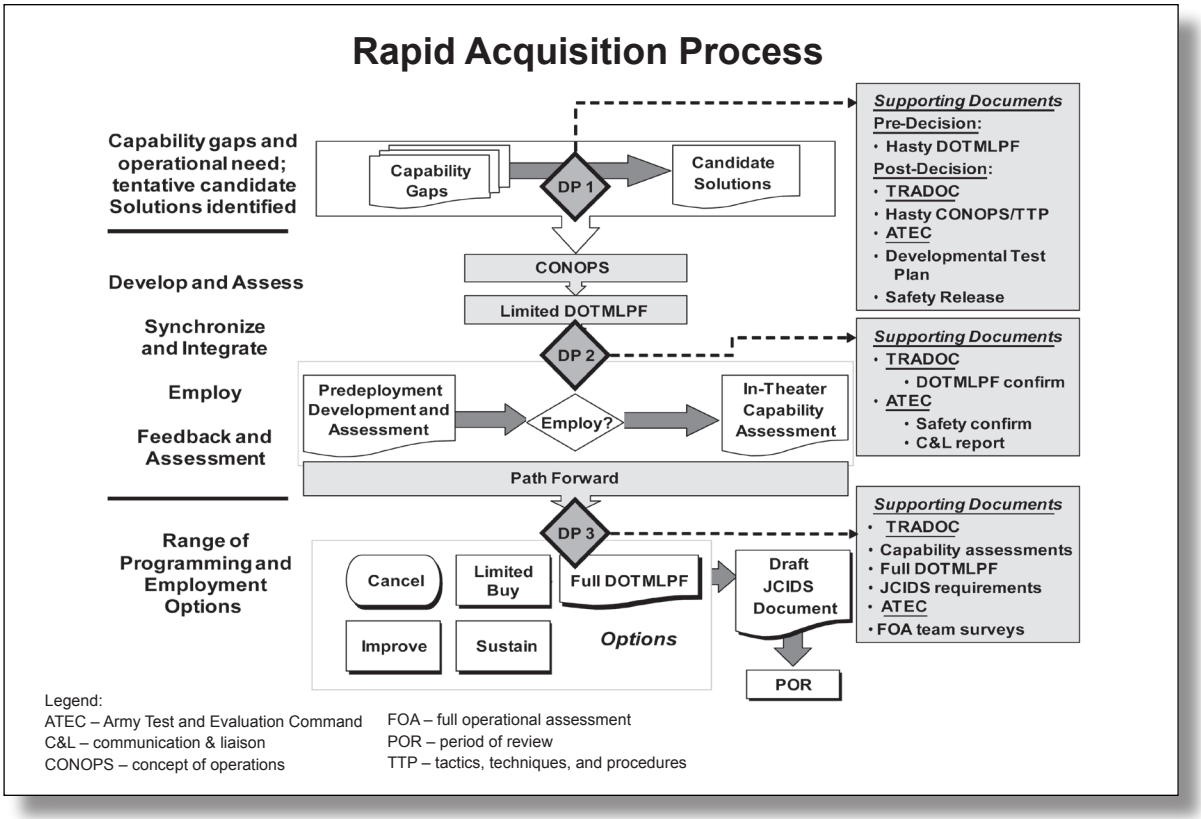


Figure 3

the newly created Leonard Wood Institute (LWI). LWI hosted a very successful MANSCEN S&T conference with industry and academic partners at Fort Leonard Wood. The S&T Branch also oversees prototype experimentation and demonstrations, getting early user feedback on potential solutions for our military forces.

TRADOC Capability Manager–Geospatial

As the TRADOC geospatial capability manager, TCM-Geospatial integrates all Army geospatial information and services capabilities to provide an interoperable geospatial enterprise supporting battle command, including operations, intelligence, mission rehearsal, and training. TCM-Geospatial tests, evaluates, and develops processes necessary to integrate the theater geospatial database and common map background for battle command.

Explosive Ordnance Disposal Fusion Division

The EOD Fusion Division oversees collaborative capability development efforts between MANSCEN and the larger EOD community, including developments in tactical and technical site exploitation; engineer explosive ordnance clearance agents; and chemical, biological, radiological, nuclear, and high-explosive (CBRNE) developments.

MANSCEN CDID Standup Observations

The MANSCEN CDID has been fully operational since September 2007. The following observations from the first year of operations have been passed along to other CoEs for consideration:

- Keep all stakeholders continuously engaged with CDID efforts.
- Recommend adding a CDID structure for current operations and accelerated capability development support.
- Consider using a CoE governance process to prioritize the CDID workload, including walk-in work.
- Use CoE commandants as DCGs to oversee functional capability as more and more support is required in classified venues.
- Establish a standard capability development resource model that helps in maintaining/gaining CDID personnel authorizations and other resources through program objective memorandum processes.

For more information about the MANSCEN CDID, call (573) 563-4082 (DSN 676-4082).

Mr. Lowrey is the deputy director of the MANSCEN CDID. His previous assignments include technical director of the MANSCEN Futures Center, technical director of the Maneuver Support Battle Lab, analysis division chief of the United States Army Engineer School Directorate of Evaluation and Standardization, and concepts officer for the United States Army Engineer School Directorate of Combat Developments. He is a retired engineer colonel from the Missouri Army National Guard.

Joint Acquisition CBRN Knowledge System (J.A.C.K.S.)

By Mr. Barrett K. Parker

The last issue of *Maneuver Support Magazine* briefly introduced the Joint Acquisition CBRN (chemical, biological, radiological, nuclear) Knowledge System, or J.A.C.K.S. This article will touch on some of its basic functionality and introduce two other automated systems that may help with materiel issues.

The majority of the functionality is available to users with an Army Knowledge Online (AKO) account, while a common access card (CAC) gives full access to perform dozens of critical materiel-related functions that previously required special coordination or access to specific hard-to-find publications. The *Shelf Life Status Tool* allows users to check specific lots of limited-life CBRN material, such as canister filters, M256 chemical agent detector kits, or joint service lightweight integrated suit technology (JSLIST). It also provides point-of-contact information for any shelf-life issues. The *Training Center* gives access to new equipment training information, such as information sheets on how to wear the new joint protective aircrew ensemble. It also provides a copy of appropriate technical manuals and student handouts. The *Fact Sheet Finder* has more than 150 information sheets available on key equipment, providing a description of the materiel, a photograph, and a listing of capabilities. With additional authorization, J.A.C.K.S. has an international collaboration area, a commercial off-the-shelf assessment tool, and other related forums. These and dozens of other functions make J.A.C.K.S. a powerful tool that should be on the favorites list of every CBRN officer and noncommissioned officer and every unit supply officer.

There are three other useful materiel-related sites that have application across the Maneuver Support Center:

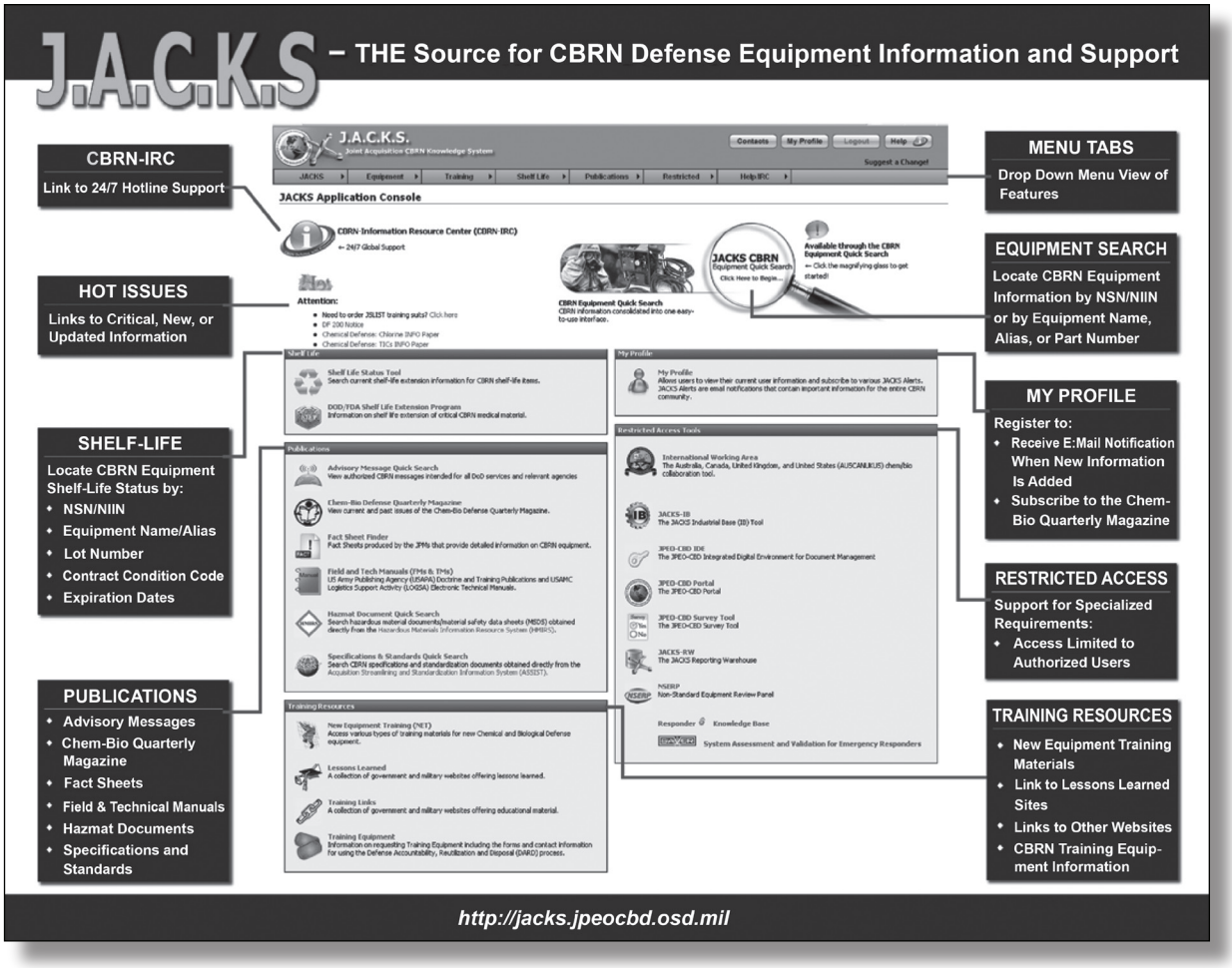
- Defense Acquisition Management Information Retrieval (DAMIR)
- Government–Industry Data Exchange Program (GIDEP)
- Acquisition Streamlining and Standardization Information System (ASSIST)

DAMIR, at <*http://www.acq.osd.mil/damir/*>, is a Department of Defense (DOD) initiative that provides enterprise visibility to acquisition program information. The primary goal of DAMIR is to streamline acquisition management and oversight by leveraging the capabilities of a net-centric environment. It identifies various data sources that the acquisition community uses to manage Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS) programs and provides a unified web-based interface to present that information. DAMIR enables the Office of the Secretary of Defense (OSD), the military Services, congress, and other participating communities to access information relevant to their mission, regardless of the agency or where the data resides. DAMIR components have replaced the need for the legacy Consolidated Acquisition Reporting System.

> *"...J.A.C.K.S. [is] a powerful tool that should be on the favorites list of every CBRN officer and noncommissioned officer and every unit supply officer."*

Purview, a component of DAMIR, is an executive information system that displays program information such as mission and description, cost, funding, and schedule. It was developed under the DAMIR initiative to provide a comprehensive view of the current state of all MDAP and MAIS programs. It is OSD's solution for structured acquisition data presentation and uses web services to obtain and display Defense Acquisition Executive Summary data directly from the Service acquisition databases. Purview users can also execute ad hoc reports. In addition, select DAMIR users can create, edit, or review the following—

- Selected acquisition reports (SARs)
- SAR baselines
- Acquisition proposed baselines
- Assessments



GIDEP at <*http://www.gidep.org/*> is a cooperative activity between government and industry participants seeking to reduce or eliminate expenditures by sharing technical information essential during research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment. Since GIDEP's inception, participants have reported more than $1 billion in prevention of unplanned expenditures. Proper use of GIDEP data can materially improve the total quality and reliability of systems and components during the acquisition and logistics phases of the life cycle and reduce costs in the development and manufacture of complex systems and equipment.

ASSIST at <*http://www.assistdocs.com*> provides access to Defense Standardization Program documents obtained from the DOD repository, the ASSIST database. This searchable database is invaluable for anyone conducting in-depth research on our equipment, including obsolete equipment for historical purposes. Searching ASSIST for the word *countermine*, for example, provides four documents; two on testing requirements, one on equipment—and most importantly—the current Standard NATO Agreement (STANAG) on the subject, STANAG 2485, Edition 2, *Countermine Operations in Land Warfare*. A search for the term *riot control agents* provides access to almost a hundred documents, including information sheets on current and obsolete agents, current and obsolete dispersal equipment, and the relevant international agreements, such as Quadripartite Standardization Agreement 317. Although most international agreements are openly distributable documents, a recent policy change now requires users to login to ASSIST at <*http://assist.daps.dla.mil*> to view images for International Standardization Agreements.

In today's Army, it is important to know where to get key and critical information in a timely manner. Nowhere is that truer than in the domain of materiel.

Mr. Parker, a lieutenant colonel in the United States Army Reserves, has worked nearly 10 years at many levels in combat developments, culminating in his current position as Technical Director, Requirements Determination Division, Maneuver Support Center Capability Development and Integration Directorate. He holds a bachelor's in earth science from Pennsylvania State University, a master's in environmental management from Samford University, and a master's in engineering management from the University of Missouri-Rolla (now Missouri University of Science and Technology). He is a graduate of the Command and General Staff Officer Course and is a certified hazardous materials manager.

Concept Capability Plan:
Combating Weapons of Mass Destruction

By Mr. Larry Lazo, Lieutenant Colonel Thamar Main, and Lieutenant Colonel Bret Van Camp

The members of the concept team at the United States Army Maneuver Support Center (MANSCEN) Capability Development and Integration Directorate (CDID), Fort Leonard Wood, Missouri, have their eyes on the future, envisioning warfare 20 years from now with a maneuver support focus. They are developing a concept capability plan (CCP) for combating weapons of mass destruction (CWMD). It describes what the Army will need to combat WMD in the years 2015 to 2024 so that necessary changes in technology, equipment, organization, and infrastructure will mature and come together sensibly in the future to provide our Soldiers with better capabilities.

Determining Future Needs

A CCP describes the application of elements of joint and Army concepts to selected mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC).[1] A CCP draws its key future ideas and capabilities from national strategy documents; the family of joint concepts; the Army family of concepts; capabilities identified in wargames, exercises, and experiments; and capabilities gleaned from lessons learned.[2] CCPs take the ideas founded in concepts and break them down into more detailed capability requirements. It is a very early step in a much larger process known as the Joint Capabilities Integration Development System (JCIDS).

JCIDS is the process by which the Services look at future threats and the capabilities needed to meet those threats. Most changes to our force—whether in doctrine, organization, training, materiel, leadership and education, personnel, or facilities (DOTMLPF)—are a result of this type of combat development work managed from within the United States Army Training and Doctrine Command (TRADOC). Figure 1, page 25, represents an overlay of the various JCIDS efforts on acquisition. Notice that *Concepts*, which includes this CCP, is at the far left of the diagram.

This article focuses on the CCP for CWMD now in staffing, but it also helps to understand how this project fits in the larger JCIDS life cycle.

CCP Development

The CCP development process takes from 10 to 18 months and is typically followed by a capabilities-based assessment (CBA). The CBA is essentially a three-step process composed of a functional area analysis (FAA), functional needs analysis (FNA), and functional solutions analysis (FSA). The FAA output is a list of required capabilities to be accomplished, along with their associated tasks, conditions, and standards. The FNA assesses the ability of current or programmed capabilities to accomplish the FAA tasks and lists any capability gaps or redundancies. The FSA is an operationally based assessment of DOTMLPF approaches to solving or mitigating the gaps previously identified. The FSA is the basis for developing the required changes, which are stated in the form of a DOTMLPF change recommendation (DCR) for nonmateriel changes and/or an initial capabilities document (ICD) to describe changes in quantity or type of existing materiel or facilities, adopt another Service's materiel, acquire foreign materiel, or begin development of new materiel.

CCP Purpose

The purpose of the Army's CCP for CWMD is to provide a concept at operational and tactical levels across the full spectrum of operations and in all environments from 2015 to 2024. The Army will use this CCP to conduct a detailed CBA for CWMD. This will provide the focus on how we will support national mandates on CWMD and how the Army will operate under chemical, biological, radiological, and nuclear (CBRN) environments.

This CCP refers to the eight mission areas found in the National Military Strategy to Combat Weapons of Mass Destruction, 13 February 2006, and uses the six warfighting functions listed in Field Manual 3-0, *Operations*, to provide the framework of how the Army will conduct military and civil support operations. The Army CCP for CWMD reflects national, Department of Defense (DOD), joint, and Army guidance beginning with the National Strategy to Combat WMD and further refined in the National Military Strategy to Combat WMD. The national strategy is based on the following pillars:

- Nonproliferation
- Counterproliferation
- Consequence management (CM)

The national military strategy expands on this construct with the following military mission areas:

- Security cooperation and partnership activities
- Threat reduction cooperation

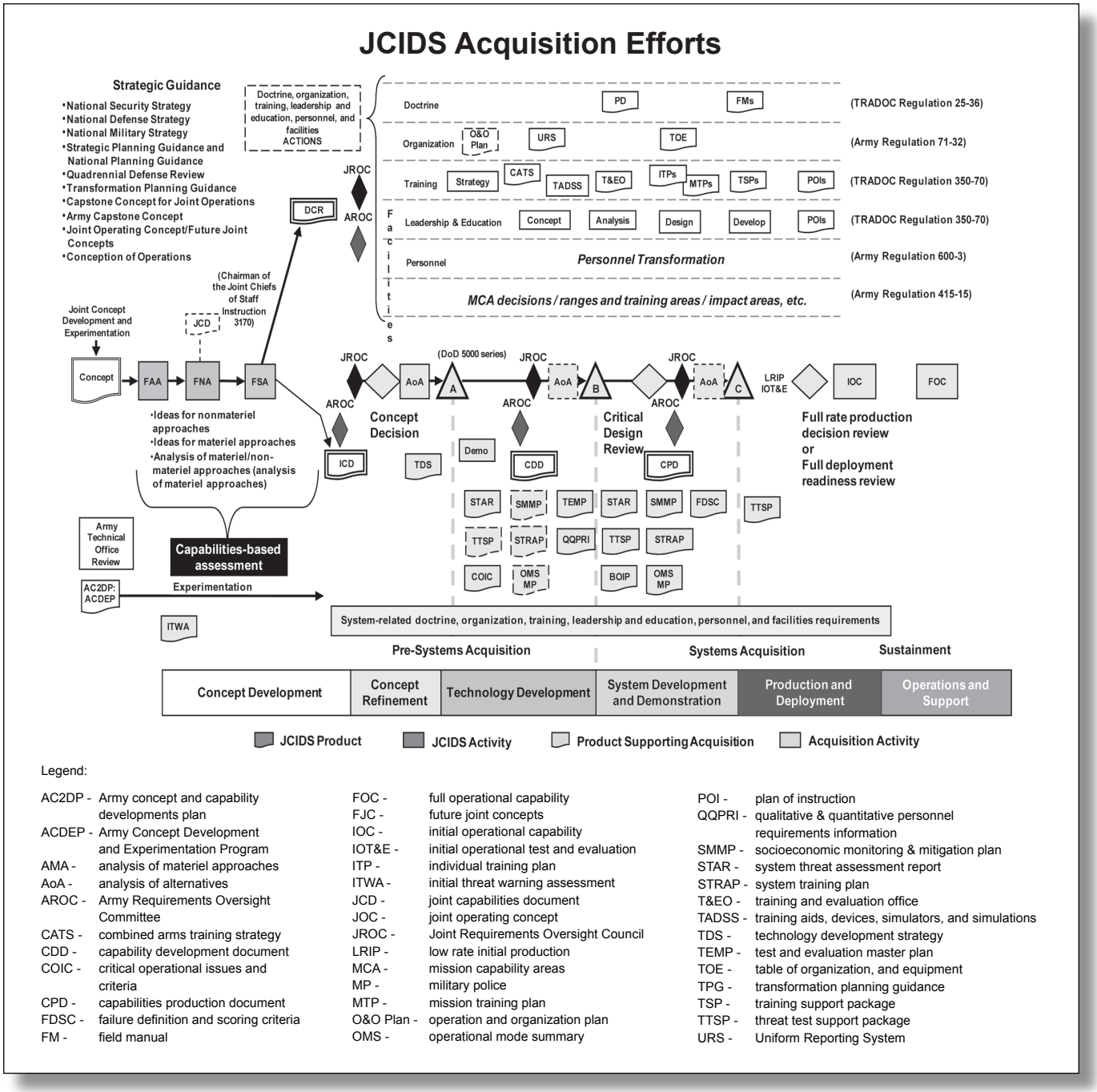


Figure 1

- WMD interdiction
- WMD offensive operations
- WMD elimination
- Active defense
- Passive defense
- CM

Of the military mission areas, six have major impacts on the United States Army and how it will fight. The first two areas—security cooperation and partnership activities and threat reduction cooperation—while very important in CWMD, only affect a small number of specialized teams of U.S. Soldiers and civilians. The CCP for CWMD will only provide a brief look at these two areas.

The operational problem we face is that the military objectives of the future Modular Force in CWMD are to proactively dissuade, defeat, deter, or mitigate the rogue behavior of WMD threat networks. The thrust of current Army capabilities in such missions is to protect against and recover from WMD attacks. The Army will continually be challenged to proactively detect, identify, track, and engage WMD threat networks before they can launch an attack. Additionally, Army mission planning will continue to evolve

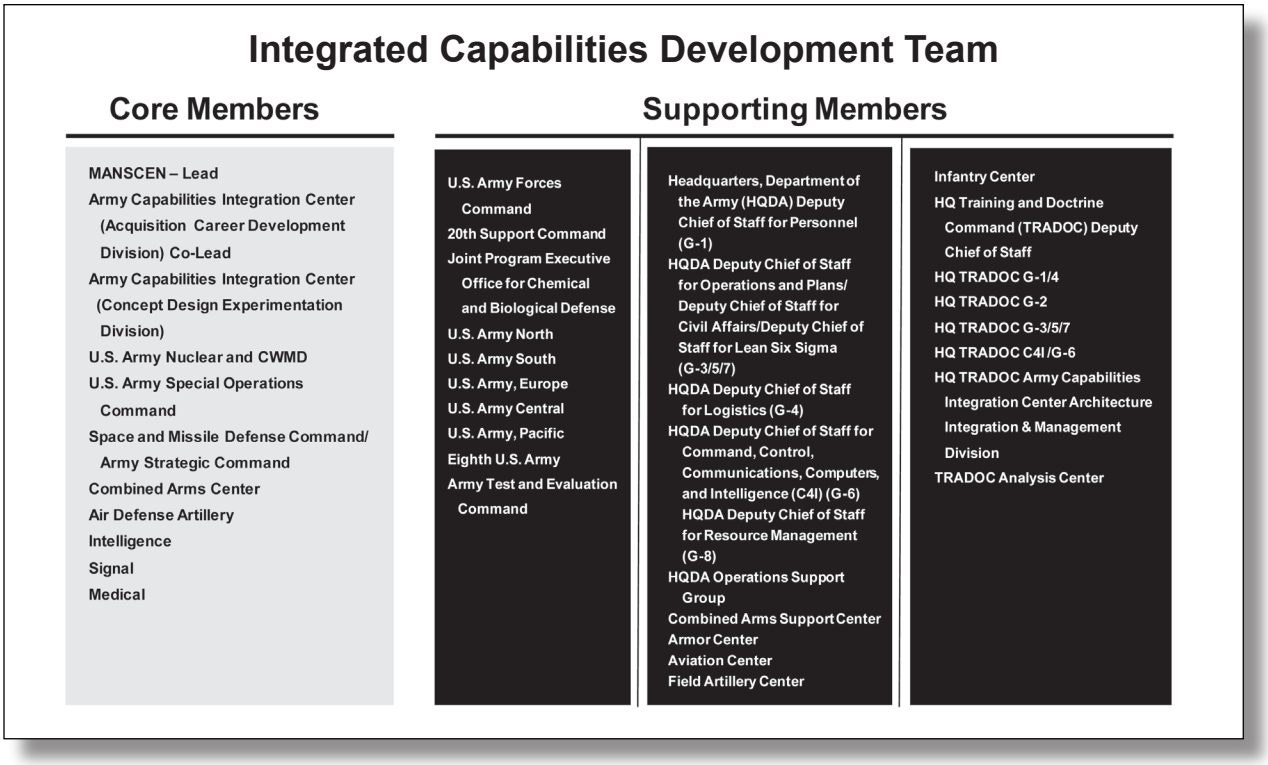


Figure 2

to fully integrate the breadth of relevant considerations in CWMD.

To solve this problem, we believe the solution is predicated on the following key ideas:

Proactive Approach to CWMD. The Army's concept for CWMD must center on proactive engagement of WMD threat networks before they can obtain or use WMD against the United States, its allies, or its partners.

Layered Approach to CWMD. The Army must layer its approach to engaging WMD threat networks. The concept of a layered approach applies to counterforce operations, sensors, protection, and training.

Network-Enabled Battle Command (NEBC). Commanders will rely on NEBC for information management that supports all combat decisions. Commanders must gain situational understanding to enable effective operations inside the adversary's decision cycle. Army planners must fully use capabilities provided by NEBC, which will provide a network that rapidly links tactical, operational, and strategic levels.

Leveraging New Technologies. Since many of the required capabilities presented in this CCP will be possible only through applications of new technology, the Army must leverage these new technologies.

Enhanced Training. Training will prepare Soldiers and leaders to exercise sound judgment in data analysis, to understand the impact of local cultures on operations, and to act in periods of uncertainty. These abilities, alongside the capabilities provided by NEBC, are vital to establish situational understanding.[3]

Central to the solution that the Army will work in concert with partners to deter WMD proliferation are the following ideas:

- Conducting counterforce operations to engage WMD threat networks before they can obtain or use WMD.
- Providing Soldier, platform, equipment, and facility CBRN protection as part of passive and active defense operations.
- Mitigating WMD effects in consequence management missions.[4]

CCP Completion

The CWMD CCP will be completed by the end of calendar year 2009. The work to compile this effort is the result of collaboration among members of an Integrated Capabilities Development Team (ICDT) (see Figure 2).

The Army Capabilities Integration Center, Fort Monroe, Virginia, signed the ICDT charter for CWMD in April 2008, though significant work had begun as early as October 2007. The ICDT's task is to identify the required capabilities for the Army's role in CWMD in the 2015-2024 time frame. Research included guiding documents such as the Army-approved Future Force Capstone Concept;[5] Army concept strategy; operating and functional concepts; joint concepts; and any approved contingency operations applicable to CWMD. The relevant guiding documents are derived from the DOD mission to dissuade, deter, and defeat those who seek to harm the United States, its allies, and partners by using—or threatening to use—WMDs, and if attacked, to mitigate the effects and restore deterrence (see Figure 3).

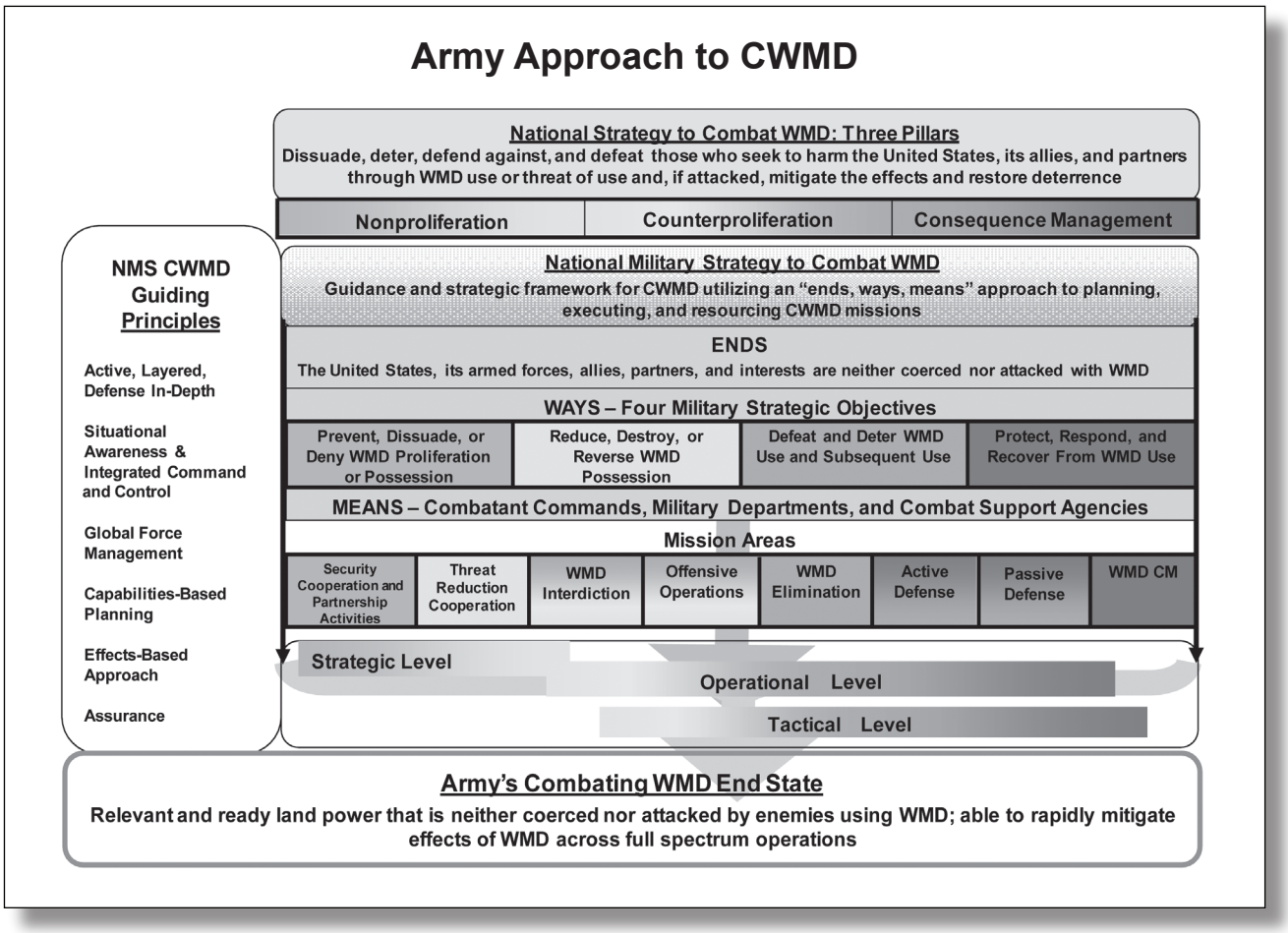


Figure 3

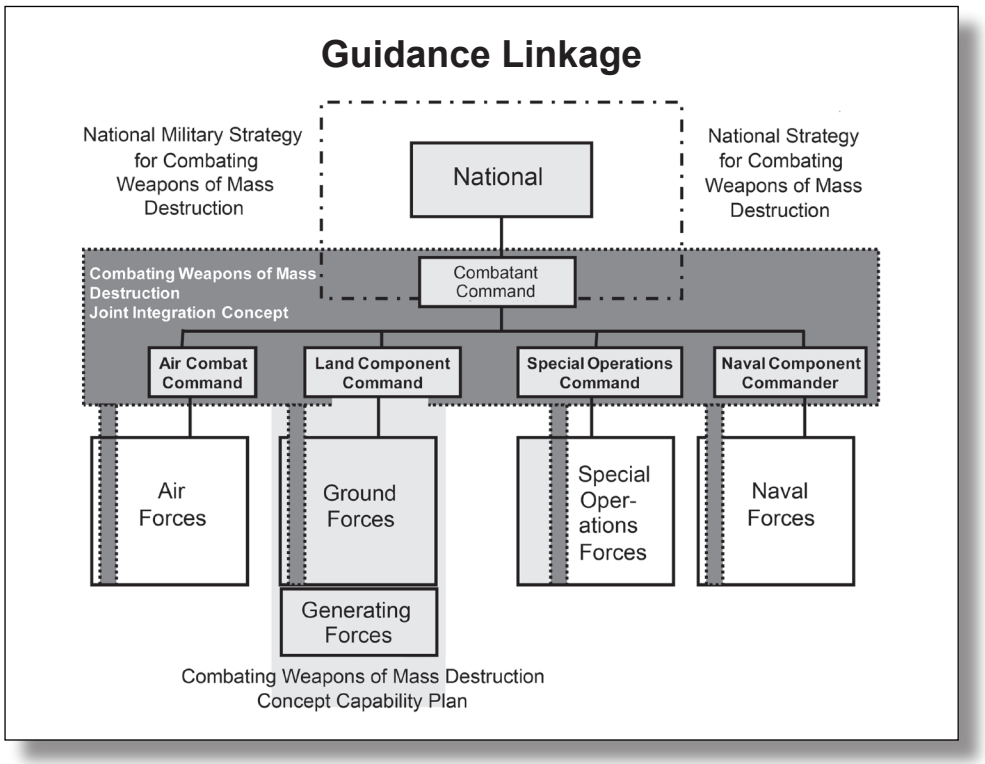


Figure 4

Integrated Unit, Base, and Installation Protection:

The DOTMLPF Change Recommendation Process

By Mr. Michael J. Martori and Colonel Arthur L. Clark

> *Improvement will require not only technological solutions but also cultural change—a willingness to challenge standard practices and question current organizational patterns and command practices.*
>
> – Chairman, Joint Chiefs of Staff General Richard B. Myers

Operations in the future will be executed in complex environments and will range from humanitarian assistance and peacekeeping to counterinsurgency and major combat operations. Persistent conflict and change characterize the operational environment. We will confront highly adaptive and intelligent adversaries who will exploit technology, information, and cultural differences to threaten U.S. interests.

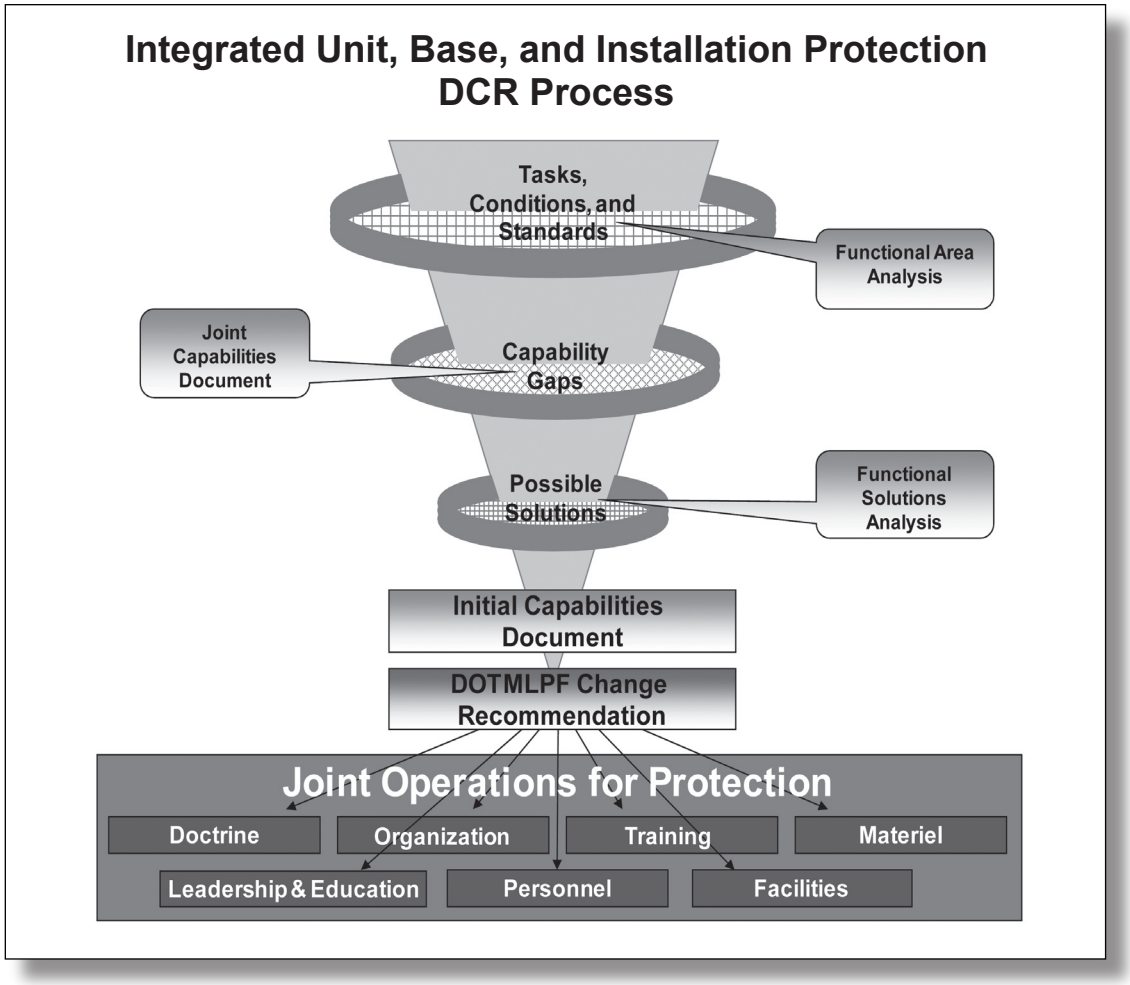
To meet these challenges, joint operations have become the norm in a multitude of areas across the full range of military operations. Protection, logistics, missile defense, combat identification, command and control, fires, deployment and redeployment, and sustainment and stability rely heavily on the power of the joint force. To enable the agility and speed required in today's operational environment, we must adjust our organizations, procedures, processes, and products to maximize the effectiveness of joint capabilities.

In the Summer 2008 issue of the *Maneuver Support Magazine*, we introduced Integrated Unit, Base, and Installation Protection (IUBIP) to the defense community. We now provide a brief overview of the doctrine, organization, training, materiel (nonacquisition), leadership and education, personnel, and facilities (DOTMLPF) change recommendation (DCR) process, the first in a series of concrete benefits from the intensive capabilities-based analysis (CBA) of the IUBIP CBA (see the figure on page 29).

By producing and implementing DCRs to maximize the effectiveness of protection capabilities, we seek to break the mold of performing acquisition and delivery of systems independent from essential DOTMLPF support structures. In contrast to receiving materiel systems and subsequently backward-engineering DOTMLPF support, the DCR process enables immediate improvement in the employment of protection capabilities and a shaping of the force for efficient receipt and use of future materiel systems.

Chairman of the Joint Chiefs of Staff Instruction 3170.01F, *Joint Capabilities Integration and Development System*, dated 1 May 2007, provides for the DCR process to begin immediately upon completion of a CBA. The IUBIP Joint Team at the United States Army Maneuver Support Center (MANSCEN) chose to wait until post-CBA completion of the initial capabilities documents (ICDs) to gain better fidelity of DOTMLPF approaches to capability gaps before beginning the DCR process.

Simply stated, the IUBIP DCRs will recommend changes to DOTMLPF domains to enhance protection capabilities. The changes will be recommended through an implementation plan listing the recommendations in priority order, discussing improvements and benefits to joint warfighting and joint interoperability, describing how the DCR would advance the Capstone Concept for Joint Operations (CCJO), and discussing the relationships between the recommendations and consequent effects (for example, how a joint organizational change has implications for a personnel change, which in turn may influence training plans); resources required to implement changes (such as additional research, materiel, Department of Defense manpower, testing, and contractor support); and rough-order-of-magnitude (ROM)



costs. ROM costs include types of funding, such as research, development, and testing and evaluation; operations and maintenance; and procurement. The DCR implementation plan must also address any constraints that may be associated with implementing the recommendation—any policy issues that would prevent effective implementation and any unresolved combatant command, Service, Joint Staff, Office of the Secretary of Defense (OSD), or Defense agency issues.

The IUBIP joint team at MANSCEN will produce two separate DCRs. The first will focus on protection issues related to the attribute of interoperability, based on the approved IUBIP ICD. The second DCR will focus on issues related to the protection functions of detect, assess, and defend (DAD), based on the IUBIP DAD ICD, currently in 3-star review.

On 22 September 2008, the joint team at MANSCEN began the interoperability DCR. Pending review, DCR completion is projected for January 2009. The DCR will present 20 recommendations from the IUBIP interoperability ICD to mitigate 12 nonmateriel interoperability capability gaps. The team anticipates completion of the DAD DCR in September 2009. The recommendations of the DAD DCR are now in study and will be finalized early in the calendar year.

One of the enduring qualities of IUBIP and a key to its success has been and continues to be the excellent cooperation between the Services, combatant commands (COCOMs), Joint Staff, and OSD. The team has kept close ties between materiel and nonmateriel development offices and initiatives, to include daily collaboration with the Navy-led joint team at Hampton Roads, Virginia, conducting the IUBIP Interoperability Analysis of Alternatives for materiel solutions. We thank our many colleagues across the Services, agencies, and DOD for their contributions and support, which have made IUBIP beneficial to the men and women of the armed Services.

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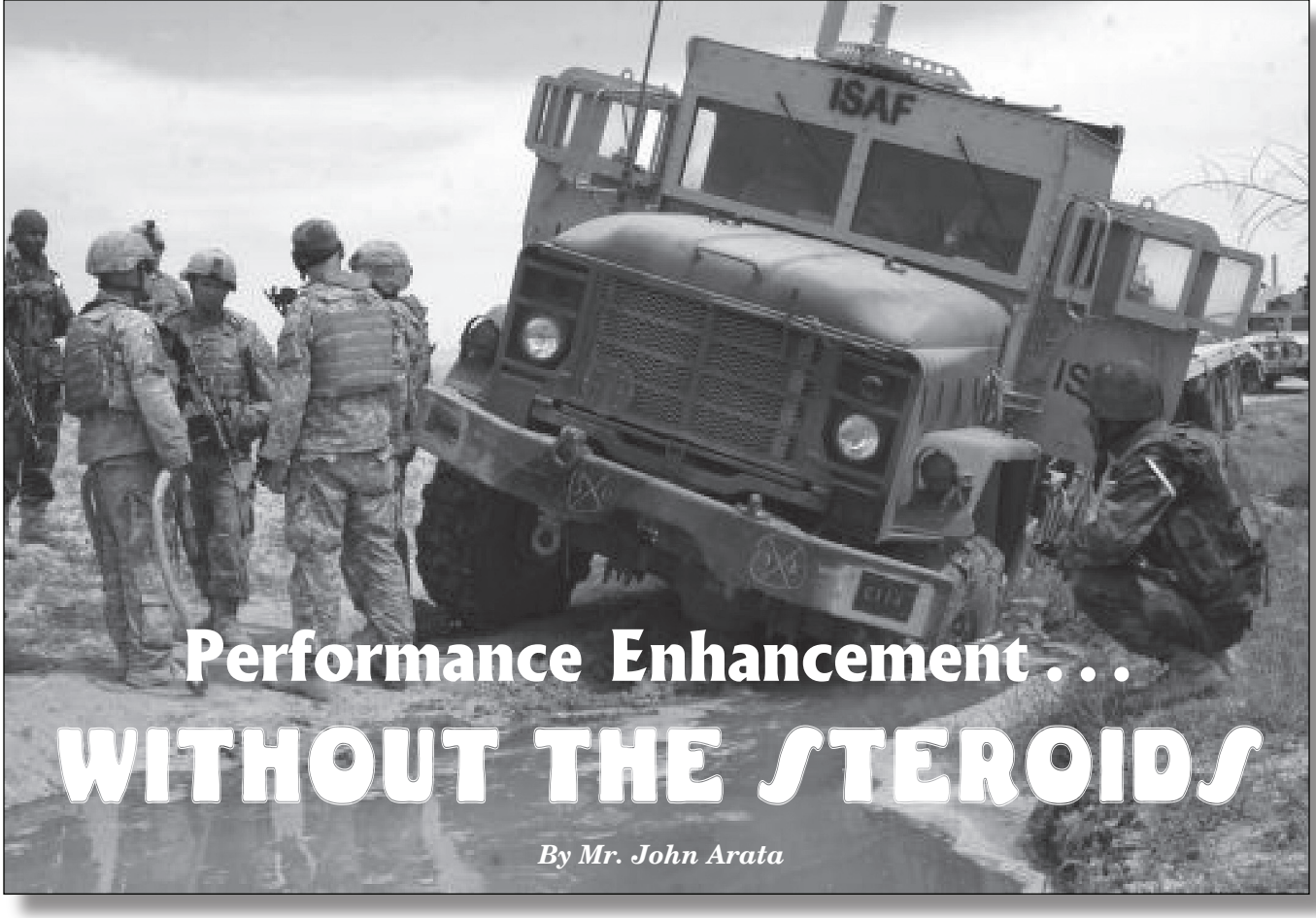
Colonel Clark is assigned to the Joint Chiefs of Staff J-34, Deputy Directorate for Antiterrorism and Homeland Defense, with his primary duty being J-3 Coordinator for the IUBIP initiative. His deployments include Operation Desert Shield and Operation Desert Storm, 1990-1991; Operation Enduring Freedom, 2002-2003; and Operation Iraqi Freedom (Qatar and Kuwait), 2005.



Performance Enhancement . . . WITHOUT THE STEROIDS

By Mr. John Arata

Scene 1: Exterior shot of an Engagement Skills Trainer (EST) 2000. Many Soldiers are near the facility, gathered around noncommissioned officers (NCOs) who are attempting to conduct "hip pocket" training. Others are grumbling, and you hear comments like "Hurry up and wait," "What a snafu," and "This is all ate up." Cut to an interior shot, looking over the shoulder of the instructor/operator (I/O), who is punching buttons on a keyboard with increasing frustration. The system won't boot up properly, and the Soldiers who are there for predeployment training are getting more and more impatient.

Scene 2: Interior shot of a typical office. A Soldier is working on a computer, muttering with frustration as she tries to use the Help feature of the word processing program so she can reformat a page into two uneven columns.

Scene 3: Exterior shot of a muddy road. The NCO in charge of vehicle recovery is studying a fuel truck mired in a rut. Another truck with a winch is in the background. A second NCO approaches and reminds the first NCO that they have to minimize environmental impact on the watershed they're in and that they must be careful not to damage the historic spring house that is nearby. The NCO in charge looks concerned and continues to pace around the site.

What do these three scenarios have in common? Each shows a Soldier who has been formally trained but now can't make effective use of that training on the work site. It could be a case where the original training was sufficiently detailed but the tasks haven't been performed routinely since the learning event, so the Soldier no longer remembers how to apply the knowledge. It could be a case where the original training covered only the basic tasks typically performed, and the Soldier was given a detailed reference manual to use to determine how to accomplish tasks not covered in the learning event. Or it could be a case where the original training gave the Soldier the ability to perform the basic tasks, assuming he or she would be able to independently adapt that knowledge later to meet the needs of more advanced or unusual situations.

Need for Knowledge

We often need to learn (or remember) how to perform specific tasks on the job. We may take a few moments to try to use support systems, such as the Help feature on the word processing program, but if that doesn't meet our knowledge need, then we will quickly move on and seek the information from other sources. That source will typically be someone we see as a "go-to" person—an expert in the subject. We all know people we consider experts in specific areas: the one who can always clear the jammed copier, the one who can always start the chain saw, or the one who can quickly get the information we need out of the database. These sources of knowledge are the backbone of informal learning, the learning that occurs outside of a formal class, learning event, or system.

Informal Learning

Informal learning makes use of knowledge that has not been "captured" and often exists only inside someone's head. To access that knowledge, we must locate and communicate with the owner. We might talk to a coworker in the office, phone someone at another office, or use e-mail

or instant messages to communicate and learn informally. A Bureau of Labor Statistics report[1] (see graph on page 32) shows that we learn more than 70 percent of what we know about our jobs through these informal processes and contacts. The people from whom we learn informally are usually present in real time, although not always in the same physical location. We each need access to experts who can answer our questions and with whom we can explore the information, practice applying it, make mistakes, and practice some more.

Seven Principles of Learning

From extensive fieldwork, the Institute for Research on Learning developed seven Principles of Learning[2] that provide important guideposts.

- *Learning is fundamentally social.* While learning may seem to be simply about the process of acquiring knowledge, it actually encompasses a lot more. Successful learning is often socially constructed, which can make the process both challenging and powerful.
- *Knowledge is integrated in the lives of communities.* When we develop and share values, perspectives, and ways of doing things, we create a community of practice.
- *Learning is a participatory act.* The desire to participate in a community of practice, to become and remain a member, is a motivator to learning. This is a key dynamic that helps explain the power of apprenticeship and the success of mentoring and peer coaching.
- *Knowing depends on practicing.* We gain knowledge from observing and participating in situations and activities. The depth of our knowledge depends on the level of our engagement.
- *Engagement is inseparable from empowerment.* We perceive our identities in terms of our ability to contribute and to affect the life of communities of which we are—or want to be—a part.
- *Failure to learn is often the result of failure to participate.* Learning requires access to information and the opportunity to contribute our own knowledge or experience.
- *We are all natural lifelong learners.* Learning is a natural part of being human. We all learn what enables us to participate in the communities of practice to which we want to belong.

Performance Support Through Communities of Practice

So how can we begin to capture that informal knowledge, or "village wisdom," and make it more accessible to all Soldiers? You may have noticed the phrase *community of practice* above. Communities of practice are groups of people who share a concern or a passion for something they do and learn to do it better as they interact regularly. Three characteristics are crucial:

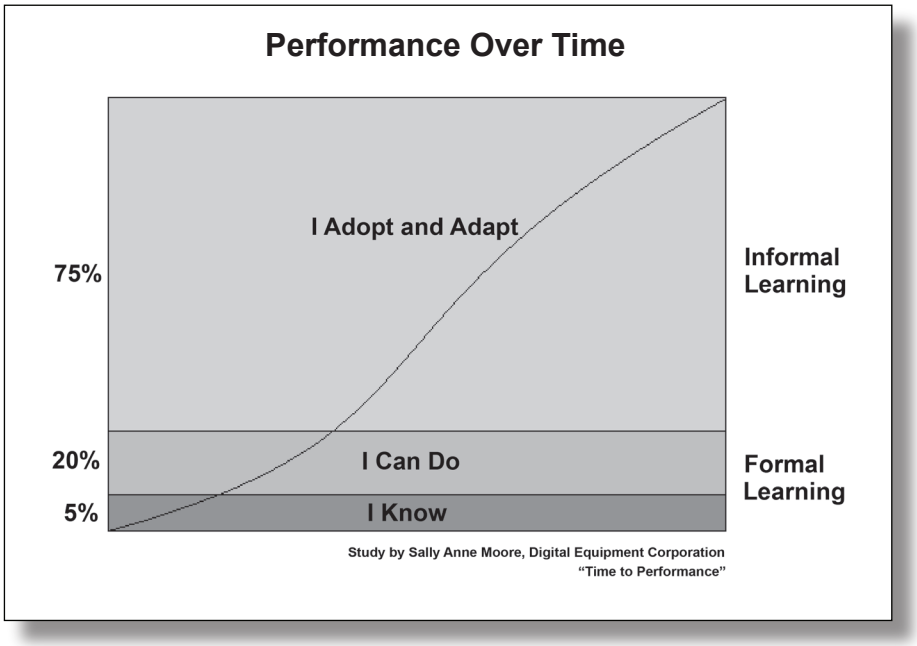
- *The domain.* A community of practice is not just a network of connections between people. It has an identity defined by a shared area of interest. Commitment to, and competence in, that area distinguish community members from nonmembers.
- *The community.* Within their domain, members engage in activities and discussions, help each other, and share information. They build relationships that help them learn from one another. While members must interact and learn together, they do not necessarily work together or at the same site.
- *The practice.* A community of practice is not simply a community of interest, such as a group of people who like old cars. Members of a community of practice are practitioners who develop a shared menu of resources: experiences, stories, tools, and ways of addressing recurring problems. This shared practice takes time and sustained interaction. The development of a shared practice may be conscious or seemingly coincidental. Community members may make a concerted effort to collect and document the techniques and lessons they have learned into an accessible knowledge base. By contrast, coworkers who often have lunch together may not realize that their lunch discussions are an important source of knowledge about how to perform their jobs. Still, in the course of their conversations, they will have developed a set of stories and tools that are used in their shared practice.

These three characteristics constitute a community of practice. If we can develop, support, and improve all three at the same time, we can sustain the community as a venue for developing and sharing knowledge.

What a Community of Practice Does

Communities develop their practice through a variety of activities. Here are some typical examples:

Problem solving	"Can we work on this special event plan and brainstorm some ideas for transportation? I'm stuck."
Requests for information	"What's the IP (Internet protocol) address for the networked printer?"
Seeking experience	"Has anyone dealt with a Soldier in this situation?"
Reusing assets	"I have a training program I developed last year. You can take it and tweak it for your unit."
Coordination and synergy	"Can we meet at the airport and carpool to the conference?"
Discussing developments	"What do you think of the new computer-aided design system? Does it really make projects go more quickly?"
Documentation projects	"We have 'fixed' this problem five times now. Let's write down the process we're going to use so we don't have to keep reinventing the wheel."
Mapping knowledge and identifying gaps	"Who knows what information, and what information are we missing? What other groups should we connect with?"



In communities of practice:

- Practitioners (community members) have collective responsibility for managing the knowledge they need, recognizing that they are in the best position to do this.
- There is a direct link between informal learning and job performance.
- There aren't formal structural limitations. Instead, there are connections between people that bridge organizational and geographic boundaries.

What the Future Holds

The United States Army Maneuver Support Center (MANSCEN) is developing additional ways to help support individual and collective performance through traditional formal learning events, processes, and programs and through the exploration and implementation of performance support and informal learning processes. The Maneuver Support Knowledge Network (MSKN) at <*https://www.us.army.mil/suite/page/275589*> is the official location where the MANSCEN Directorate of Training places current and relevant information related to the maneuver enhancement brigade (MEB); brigade special troops battalion (BSTB); and special subject doctrine, training, and leader development. This site supports field units and Soldiers and requires an Army Knowledge Online (AKO) login.

Informal Learning in Action

Replay Scene 1: The EST 2000 I/O is punching buttons on the keyboard with increasing frustration. The system won't boot up properly, and the Soldiers who are there for predeployment training are getting more and more impatient. Finally, the I/O gets on the phone and calls the dedicated help desk. Together, the I/O and the expert at the help desk work through the problem, quickly returning the system to service.

Replay Scene 2: The Soldier had been muttering in frustration as she tried to use the Help feature of the word processing program in an effort to reformat a page into two uneven columns. Now she stops, looks around, and finds the office word processing "guru," who is able to quickly teach her the steps she needs to modify the document.

Replay Scene 3: A second NCO approaches the NCO in charge of recovering a fuel truck stuck in a rut and reminds her that they have to minimize environmental impact on the watershed. They also must be careful not to damage the nearby historic spring house as they free the fuel truck from the mud. The NCO reconnoitering the vehicle recovery asks the second NCO for advice, and the two collaborate and reach a decision on the best way to safely recover the mired fuel truck while minimizing collateral damage.

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Endnotes

[1] M.A. Loewenstein, J.R. Spletzer, "Formal and Informal Training: Evidence from the NLSY," Research in Labor Economics, U.S. Department of Labor, Vol. 18, 1999, pp. 402-438.

[2] Institute for Research on Learning, Menlo Park, California, 1999.

Appearing Larger Than We Are:

The Story of the 1st Brigade Special Troops Battalion, 1st Brigade Combat Team, 82d Airborne Division

By Lieutenant Colonel Frederic A. Drummond and Major James H. Schreiner

During Operation Iraqi Freedom (from June 2007 through July 2008), the 1st Brigade Special Troops Battalion (BSTB), 1st Brigade Combat Team (BCT), 82d Airborne Division, deployed to Contingency Operating Base Adder in Dhi Qar Province of southern Iraq. Initially charged with the theater security and security forces mission for Dhi Qar, al Muthanna, and Diwaniyah Provinces, the battalion conducted a successful in-stride transition to an operational overwatch mission in the provincial Iraqi-controlled province of al Muthanna and assistance in Dhi Qar. The 1st BSTB was charged with a mission set that tested the limits of the organization. The counterinsurgency (COIN) fight in the Shia-dominated, Iranian-influenced south presented difficult and unique challenges, and it led to a comment about "appearing larger than you are" by General David Petraeus, Multinational Force-Iraq (MNF-I) commander, on a visit to one combat outpost. This is exactly what the battalion was tasked to achieve and exactly what it accomplished. The 1st BSTB was the right unit, with the right capabilities, at the right time to fight counterinsurgent and criminal elements in a nontraditional BSTB role. Through the use of a dynamic task-organization leveraging additional BCT assets, a well-defined campaign design with a stringent targeting system to adjust it, detailed interagency coordination enabling, and creative small-unit leadership, the BSTB's capabilities are well suited for COIN operations.

Traditional BSTB Tasks

Before describing how the 1st BSTB achieved success, it is important to understand more traditional BSTB tasks and current tactics, techniques, and procedures that have evolved during the War on Terrorism. The doctrinal mission statement of the BSTB highlights rear area security as one of the main tasks the organization was designed to accomplish. This responsibility is where the BSTB is more limited in nature due to the lack of depth in the organization. Traditionally, the BSTB has been employed to provide intelligence and signal enablers for the BCT, limited civil-military operations (CMO) command and control (C2) oversight, military training teams, route clearance operations, some base defense operations (with significant augmentation), detainee operations, and BCT C2 support and security with the headquarters/BCT company. Many of these above tasks are stovepiped toward addressing specific BCT-level requirements that a BCT commander may not have the organizational energy to focus on specifically and are rarely used in close coordination with each other.

> *"Through the use of a dynamic task-organization leveraging additional BCT assets ... the BSTB's capabilities are well suited for COIN operations."*

Often, BSTBs are used as force provider units to augment BCT operations or other task force-sized elements handling very specific tasks. Rarely is a BSTB headquarters charged with planning, synchronizing, resourcing, and executing multiple items from the BCT mission-essential task list (METL) in a BCT's area of operations. The 1st

BSTB validated the idea that the fusion of its unique capabilities into small units under a company C2 system—with the battalion providing the framework for that unity of effort—is ideal for the mission. This unique fusion provided a new way to "appear larger than we are" with some BCT enablers helping to build capabilities that lacked depth. The combination of such capabilities validates the theory described in the July-September 2006 issue of *Engineer* by then Lieutenant Colonel Thomas H. Magness, then an Army War College fellow at the University of Texas, that 1+1+1>3 in a complex COIN fight.[1] With the right balance and clear vision, the BSTB has ideal capabilities and diverse military skills to apply to COIN operations in a BCT mission set.

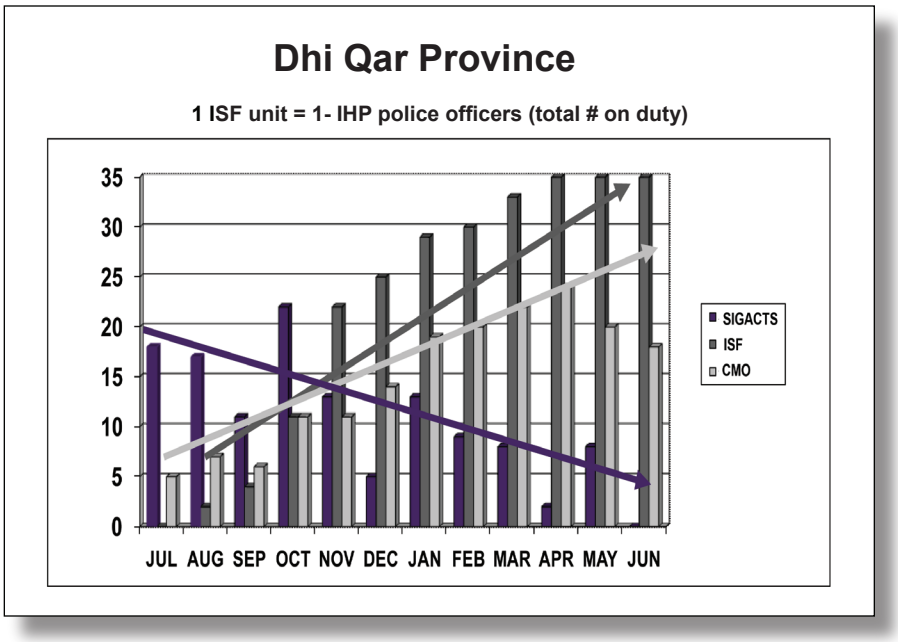

Figure 1. Trend Lines of Enemy Activity (EFP/IDF/Complex Attacks) on Coalition versus CMO Engagements/Partnerships and Capable ISF Application

The support behind the argument is generally found within the statistics over the 1st BSTB's 14-month combat tour. Three primary mission-essential tasks were assigned to the battalion:

- Secure freedom of movement along Main Supply Route (MSR) Tampa
- Provide operational overwatch to al Muthanna Province
- Conduct CMO for the BCT

The results for the 1st BSTB's combat actions from June 2007 through July 2008 argue that, while not a completely causal relationship, the skill sets of a BSTB can be very effective within a sound COIN strategy. The downturn in enemy operations (see Figure 1) was a result of all the teams operating in southern Iraq—to include other defense agencies, civil affairs teams, provincial reconstruction teams (PRTs), and other government agencies (OGAs)—but the battalion was a key enabler and catalyst for significant atmospheric changes in the tribal areas that had been previously untouched by coalition forces. This persistent engagement with the locals and assistance from provisional government officials aided in the tremendous success achieved by all forces listed above.

Dynamic Task Organization

On arrival in June 2007, the BSTB was assigned to secure five radio relay points along MSR Tampa and to disrupt improvised explosive device (IED) cells along the MSRs. An offensive mind-set, and some creative repositioning of critical enablers from the brigade and battalion, turned these five relay points into three legacy combat outposts (COPs) through the use of improved communications systems; mortar teams; and human intelligence (HUMINT) collection, signal, and intelligence capabilities. The remaining COPs were task-organized with a similar capability due to threats, but could easily be modified to address surges in explosively formed projectiles (EFP) activity, PRT efforts, and basic engagement needs as the mission set was modified. At COP 4 in Diwaniyah Province and COP 9 in Dhi Qar Province, the threat was almost exclusively from EFPs, complex attacks, and indirect fires (IDFs). At COP 6 in al Muthanna Province, the threat was mostly from criminals acting against Iraqi commerce, using MSR Tampa as the most expedient route from Basra to Baghdad. The task organization in Figure 2, page 35, became the essential team that staffed the COPs throughout the 14-month rotation. Guidance from the MNF-I commander was to "live among the people. You cannot commute to this fight. Position … combat outposts … in the neighborhoods we intend to secure. Living among the people is essential to securing them and defeating the insurgents."[2] The 1st BSTB provided a solid mix of capabilities when augmented by a few additional BCT assets and epitomized the General Petraeus strategy of forward engagement.

Fundamental to the success of each COP was the diverse mixture of military occupational specialties and multiple branch-specific officers. The COPs, with fewer than 100 Soldiers each, could deal with installation defense, installation support, route security, CMO, and security force partnerships. Deliberate route clearance along 250 kilometers of road led to the reduction of Tier 1 IED hot spots from eight in June 2007 to zero in March 2008. This allowed a distinct move to hold-and-build operations along that same stretch of road while maintaining flexibility for the commander to surge security forces back.

Combat engineers and military police focused efforts on security and partnership with Iraqi army, police special units, and Iraqi Highway Police (IHP), while CMO patrols engaged the populations, enabling PRTs and other agencies to build capacity and infrastructure. Together, these efforts

created space, or freedom of movement, for all engagements. HUMINT collection team (HCT) operations from COPs 4 and 9 would be integrated into all security and CMO patrols, thus filling information voids in the three provinces. That in turn led to increased freedom of movement and multiple target packages to be handed off to maneuver forces. The diverse set of capabilities brought to bear set conditions for an ever-increasing sphere of influence for the BCT in the three provinces. In essence, it set conditions for the transition from telecommunications and theater security to an effective operational overwatch mission and created space for the BCT to expand its reach and support Iraqi army operations in Basra and Amarrah with great success during April and May 2008.

Campaign Design and Targeting

The dynamic task organization is only good if all the unit efforts are working toward one common goal. Understanding the dynamics of the COIN fight, and the propensity for battalion milestones to change in achieving that goal, forced an extremely defined, yet adaptive, process to be created. Field Manual (FM) 3-24, *Counterinsurgency Operations*, has dedicated a complete chapter to the development of rigid processes that increase unit flexibility. "The campaign design must therefore guide and empower subordinate leaders to conduct the coordination, cooperation, and innovation required to achieve the campaign purpose in a manner best suited to local conditions."[3] In operations across three provinces, fighting three distinct sets of enemy influence and actions, the need for relevant systems was instrumental to any success the battalion would have.

The operational design enabled the battalion to keep its focus clearly within a security logical line of operations (LLO) with focus on the COPs and freedom of movement along the main and alternate supply routes. Flanking efforts included the operational overwatch of the al Muthanna Province and a separate LLO for the engagements with three separate PRTs. This road map for the battalion was nested within the BCT targeting cycle and allowed the battalion to adopt a one-week targeting and synchronization cycle that was adaptive and responsive enough to stay even with, or ahead of, the daily change in atmospherics. Reactions to EFP Tier 1 sight evolution; security and reconstruction changes in dynamics; a changing political landscape at provincial, tribal, and district levels; and the BCT focus on operational-level and some strategic-level planning was possible through this system. A simple fragmentary order (FRAGO) with a synchronization and execution matrix enabled resourcing to support operations along the 250-kilometer stretch of MSR. This FRAGO also included the overwatch portion of the battalion's mission.

The culmination of the process included a weekly briefing to the battalion commander that included the following:

- Intelligence summary with more detail than the normal battalion operations and intelligence briefings
- Battalion milestone review with measure-of-effectiveness trends from the previous week
- Breakdown of the high-payoff target list with actionable efforts toward achieving those milestones

New milestones were nominated in this meeting, and the high-payoff targets would be rendered active or passive for the upcoming week. Battalion planning priorities of work would be locked in by the commander and focus the staff for two weeks out. The end-state was an order that provided course corrections to the campaign plan and added maximum flexibility for the COP commanders to engage in security, partnership with Iraqi Security Forces (ISF), and reconstruction efforts. The systems allowed the commander to exercise effective battle command. In particular, the battalion could see the enemy and adapt quickly to understand the dynamics governing the environment.

"Understanding tribal loyalties, political motivations, and family relationships is essential to defeating the enemy we faced, a task more akin to breaking up a Mafia crime ring than dismantling a conventional enemy battalion or brigade."[4] The system created an environment

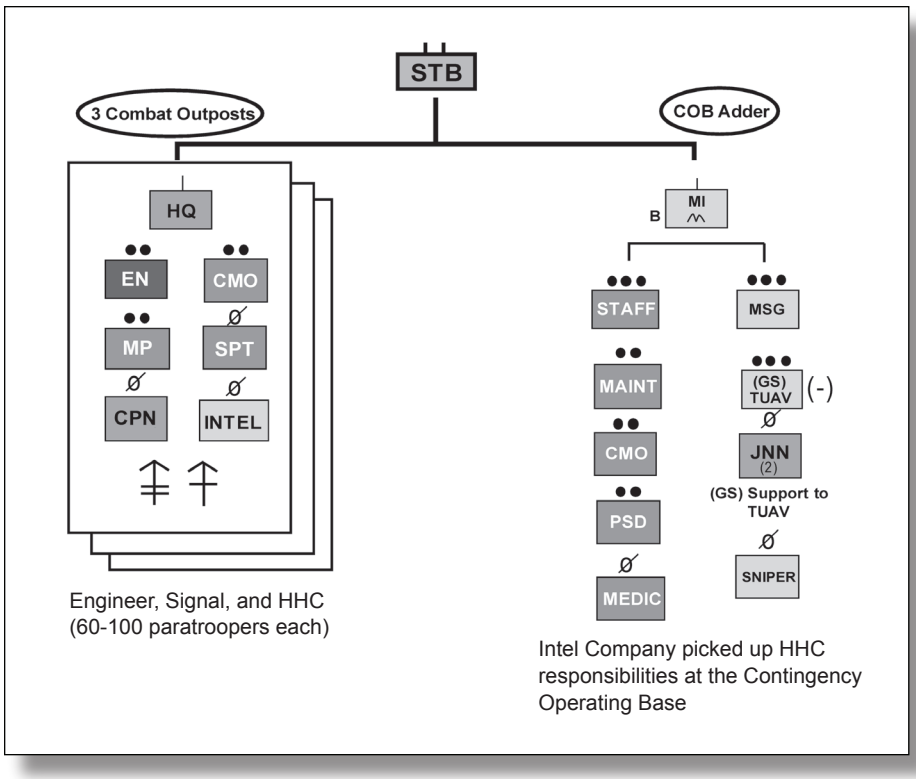

Figure 2. Task Organization

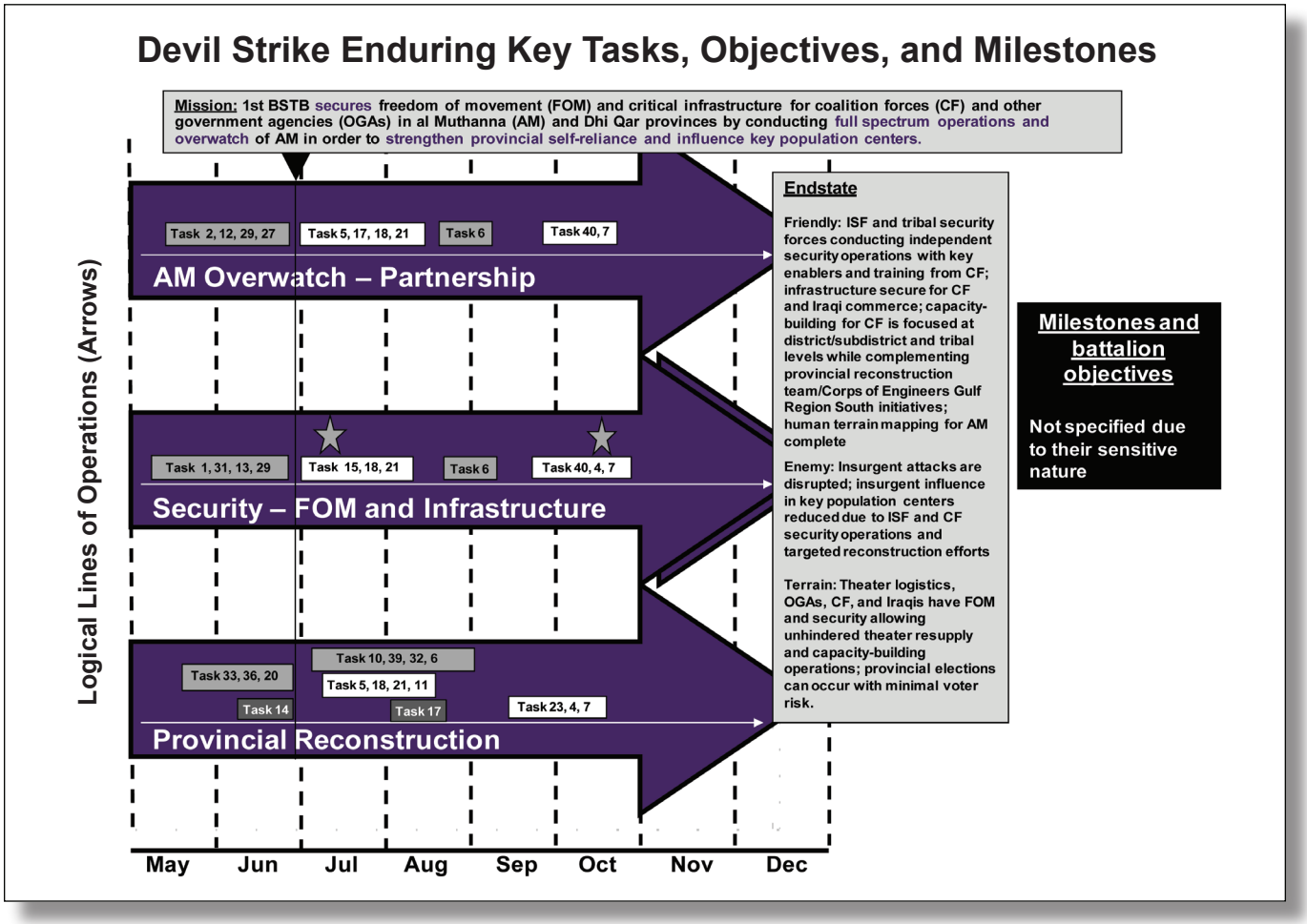

Figure 3. Battalion Milestones and Logical Lines of Operations

within the battalion that allowed the creation of a "human terrain map," helping to feed the targeting process and answer battalion and brigade commanders' critical intelligence requirements. The process enabled the COIN fight focus, and the unique characteristics of the BSTB created the capability to address a wide array of challenges, with these systems providing the rudder for all operations.

In total, the battalion staff required external assets to implement this system, much like the COPs needed augmentation in mortar crew and HCT operators. The need for a full-time fire support/targeting officer, a signal officer, and a CMO officer were just three fills that were external tasking, but critical to mission accomplishment. Systems in a BSTB can make the battalion a large force multiplier to the BCT, but key augmentations must be addressed from a modified table of organization and equipment (MTOE) change initiative. Further review of these critical capabilities must accompany unit status reporting and drive the study of MTOE revision for the unit to be a more independent and self-sufficient enabler in both lethal and nonlethal operations in support of a BCT.

While there are some areas where help is needed, the diverse BSTB staff capabilities create an extremely positive learning atmosphere. For example, within the operations and training section alone, an engineer officer in charge led a team of two infantry captains, two military intelligence captains, a logistics captain, and a fire support officer. Making all orders and targeting operational for four different types of companies with 67 different military occupational specialties with different METL sets of core competencies was extremely complex. Leaders in a BSTB must learn each other's skill sets so that the companies can be properly planned for, resourced, and led in training and operations. The rigid campaign design and targeting process provides the framework to ensure that a common language is understood and that the diverse nature of the organization can be overcome when working outside of the core mission sets.

Interagency Engagement and Engaged Leadership

The systems in place in the 1st BSTB enabled quick recognition that a plan was on or off course. Commanders at the battalion and company levels—and their understanding of the nested commander's intent—allowed for maximum creativity in developing the "how" to achieve milestones (see Figure 3). Subsequently, the strong relationships with the Department of State (DOS) and other governmental agencies allowed "spheres of influence" to expand rapidly. FM 3-24 has dedicated an entire chapter to leadership, which must be creative and accountable.

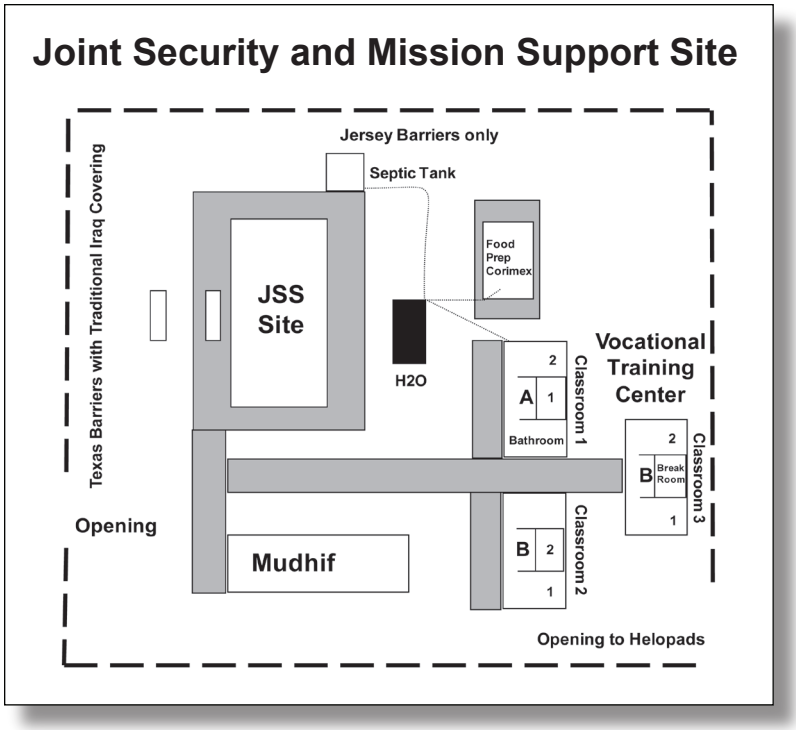

Figure 4. An Example of a JSS/MSS

"Senior commanders are responsible for maintaining the 'moral high ground' in all deeds and words of their units."[5] The battalion leadership understood that while the COIN fight is extremely decentralized in nature, each commissioned and noncommissioned officer must be grounded in the commander's intent and prepared to enforce legal and ethical behavior while implementing creative solutions to win influence over the population or deny influence to the enemy. In many instances, this meant high densities of leadership with few Soldiers to conduct key leader engagements.

One prime example of battalion imagination was the creation of a joint security site (JSS)/mission support site (MSS) at COP 6 in al Muthanna Province (see Figure 4). This combined effort between the PRT, the Civil Police Authority Training Team, and coalition forces occurred from battalion through platoon levels. The 1st BSTB provided security for the C2 site, freedom of movement for the PRT throughout the province, and leverage with partners in the ISF and government to begin advanced training of special police and Iraqi army units from the site. It offered a JSS for intelligence sharing and partnership development between key players in the province, encompassing governance at the tribal and provincial levels, and security elements. This initiative was not a specified task, yet it became a beacon for other provinces, Iraqi government officials, and U.S. congressional staffers who became interested in studying because the site leveraged the capabilities of Department of Defense (DOD), DOS, and other agencies in appearing larger than we were. This one example was developed over time by the PRT team chief with the battalion and COP 6 commander and staff.

Another example of creative leadership emanated from the military police leadership at COP 6 and COP 9, who developed training plans with the IHP, the most under-resourced security forces in the ISF. Weekly classroom, range, and on-the-job training enabled the building of bonds between the units and helped deter more than 15 EFP detonations and traffic accidents.

Two examples of the BSTB's unique capabilities that would be missing in maneuver units were the engineer and CMO leaders closely working with the PRTs and military police Soldiers who were experts at traffic checkpoint operations. Given the COIN threats of small EFP and indirect-fire cells, and the limited-sized threat to the units, the BSTB brought the ideal capabilities to apply to the problem set. Couple this with an imagination that can expand and build new concepts in the interagency and multinational reality, and the unit can thrive. Many of the integration concepts for the JSS/MSS are now being studied in new DOS structures for teaching at combat training centers and in the Officer Educational System. An interagency team is currently working to develop such a structure and will become the hub for all PRT lessons learned at DOS and DOD training centers.

One area that will have to be closely developed is the DOS mind-set that an aggressive approach in engagement is needed at provincial, tribal, and district levels simultaneously. This was perhaps one area where a battalion can only cover so much ground due to lack of subject matter experts. The willingness to use those experts and reach out to the provinces plays a key part in the hold-and-build portions of a COIN fight. Even with a mixture of engineers, military police, and CMO personnel, a BSTB still is heavily reliant on DOS experts. Understanding COIN strategy is not a responsibility of DOD alone. Interagency engagement is only as good as the understanding of leaders in both organizations of COIN doctrine.

Summary

Despite many challenges, the 1st BSTB proved that it could be an extreme force multiplier in the COIN fight when left to fight as an organic battalion with key enablers from the BCT. In 14 months, it took roads most susceptible to EFP and complex attacks and reduced the frequency of attacks by as much as 90 percent in most areas and eradicated them completely in others. Augmented with a robust CMO and ISF partnership strategy, systems to keep the battalion leadership on course, and the inclusion of OGAs, the battalion enjoyed extreme success. One of the key themes of the battalion was to "extend a hand in partnership, but always remain vigilant of the threat." Learning to adapt to the challenges and threats was a daily fight, but accomplished to a high standard. It is possible for

a BSTB to operate successfully as a multifunctional battalion. It is about appearing larger than we are as a coalition and will continue to be as long as we are asked to fight and win the nation's wars.

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Major Schreiner is an engineer officer serving as the 1st BSTB's executive officer. He was previously a battalion operations officer during Operation Iraqi Freedom. He served as a company commander in Operation Iraqi Freedom and as a strategic reconstruction officer to Combined Forces Command–Afghanistan Engineer Directorate in 2005. He holds a master's in engineering management from the University of Colorado and is a certified project management professional. He can be contacted at <james.schreiner@us.army.mil>.

Endnotes

[1] Lieutenant Colonel Thomas H. Magness, "Brigade Special Troops Battalions, Part I: All the Way In," *Engineer*, July-September 2006, p. 47.

[2] General David H. Petraeus, "Multinational Force–Iraq Commander's COIN Guidance," *Military Review*, 21 June 2008, p. 1.

[3] Field Manual (FM) 3-24, *Counterinsurgency Operations*, December 2006, p. 4-6.

[4] John A. Nagl, *Learning to Eat Soup With a Knife: Counterinsurgency Lessons From Malaya and Vietnam*, University of Chicago Press; Chicago, Illinois, 2005, p. 13.

[5] FM 3-24, p. 7-2.

("Concept Capability Plan," continued from page 27)

Army's Role in CWMD

Among the three pillars of the national strategy—nonproliferation, counterprolifration, and consequence management—the Army has major operational requirements within the second two. The scope of this concept, while Army-centric, is unconstrained in CWMD and includes relationship and integration with the joint forces, governmental offices, and nongovernmental organizations.

Figure 4, page 27, shows what we believe are the primary audiences for guidance, beginning with national-level documents such as the national strategy and national military strategy to combat WMD; the United States Strategic Command; the CWMD Joint Integrating Concept (JIC), which is a critical bridge from national-level strategy; and the CCP to combat WMD now underway.

The CCP scope is intentionally broad in order to provide a single-source body of work from which action officers can consistently and holistically ascertain the Army's future requirements. It is ambitious, but necessary, to approach this from an Army perspective in a holistic manner. We intend to formalize the process whereby ongoing JCIDS efforts benefit from this CCP. Ultimately, the results of this CCP will serve to inform CBAs already in existence, those under development, and those undergoing periodic review and update. Regardless, each of these CBAs has one singular focus—to provide better capabilities to the Soldier on the ground. So, if asked about ways to improve our Army, consider your input a contribution to the military our sons and daughters will inherit.

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Lieutenant Colonel Van Camp is Chief, Operational and Strategic Maneuver Support Branch, Capabilities Development and Integration Directorate. He has served as Commander, 82d and 84th Chemical Battalions, and Chief, Concepts, Studies and Analysis Branch, Joint Requirements Office for CBRN Defense, Joint Staff, Washington, D.C.

Endnotes

[1] Army Capabilities and Integration Center, Concept Capability Plan (CCP) Writer's Guide

[2] Ibid.

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Maintenance in the Brigade Special Troops Battalion

By Lieutenant Colonel James W. Craft III and Chief Warrant Officer Three Louis Watkins, Sr.

The brigade special troops battalion (BSTB) is designed to provide command and control and logistics support to combat support elements, namely the military intelligence and signal companies that were once attached to brigades from division-level assets. Doctrinally, the BSTB also provides logistics support to the brigade headquarters and command and control and sustainment for all of the nonorganic units operating in the brigade combat team's (BCT's) area of operations. Each of these nonorganic units can have a different command relationship with the BCT, making the support role a bit complicated. The BSTB concept is a success on many levels and provides the brigade commander with flexibility but, with a few modifications, the BSTB can become an even more valuable asset and a true combat multiplier for the brigade commander.

The BSTB can adequately support its organic companies, but it struggles to sustain all of the nonorganic units in the BCT's area of operations. Formed in late 2004, the 2d BSTB of the 2d BCT, 4th Infantry Division, was a blend of Soldiers with 54 different military occupational specialties (MOSs). The unit deployed to Iraq in November 2005 and was located on a remote forward operating base (FOB). The BSTB was responsible for supporting itself, a military transition team, and 16 additional company-sized elements that directly supported the brigade but lacked their own organic support elements.

The BSTB, operating as it was doctrinally designed, faced several logistic and maintenance challenges. As a result of adding attached units, the battalion had to maintain too many generators, air conditioners, and vehicles to support without increasing our personnel authorizations. Additionally, the increase in maintenance support tasks created high demands on our authorized spares and stock levels. The BSTB's intelligence and electronic warfare (IEW) repair section and the signal maintenance section—despite being ill-equipped and short on manpower—performed heroically, maintaining numerous newly fielded intelligence and signal systems. The United States Army Logistics Support Activity (LOGSA) Maintenance Master Data File (MMDF) and Standard Army Maintenance System (SAMS-1) did not support reporting the mission-capable status of commercial off-the-shelf (COTS) items, which ultimately impacted the flow of repair parts. The intense heat, operational tempo, and overall effectiveness and popularity of the tactical unmanned aerial vehicle (TUAV) created maintenance dilemmas for their assigned maintainers. This article will explore three areas—mechanical maintenance, IEW and signal maintenance, and TUAV maintenance—and provide suggestions on how to realize the full potential of the BSTB.

Photo by Specialist Alexis Harrison

Welding is a critical skill for maintenance. To meet the need for welding on regular repairs and on up-armored HMMWVs, the 2d Brigade Special Troops Battalion had to cross-train two Soldiers who had some welding experience in civilian life.

Mechanical Maintenance

Maintenance capability in the BSTB resided primarily within the headquarters company and was made up of a unit maintenance technician warrant officer, 6 noncommissioned officers, and 18 mechanics. This was too few mechanics to maintain the fleet of more than 150 vehicles, 100 generators, and 60 environmental control units (ECUs) owned by the BSTB, the brigade headquarters, and the additional units directly supporting the BCT.

The BSTB overcame the shortages and succeeded for several reasons. First, one particular maneuver battalion's forward support company (FSC) was able to assist with vehicle maintenance. The battalion also was extremely aggressive with its power generation and air conditioner cross-training, and they enjoyed access to forward repair activities near Baghdad. Finally, the battalion was able to avoid tasking mechanics for guard detail since our brigade did not operate a tactical command post.

The Army relies on the manpower requirements criteria (MARC) system to develop unit authorizations. Either the formulas for determining manning authorizations are incorrect or someone decided that our current manning levels are acceptable and ignored the criteria. The MARC takes into account equipment density and time needed to perform repairs. When equipment is added to a unit, adding people is justified. The MARC system cannot predict which units will be attached to any given unit, and the BSTB is not designed as a tailorable organization. Units directly supporting the brigade should have arrived with their own support slice; however, only one unit—a military police company—arrived with its own logistics support. Commands must develop a way to enforce the responsibilities associated with each type of command relationship, or units like the BSTB should be manned so that they can properly support attached and assigned units.

Organizational problems (probably related to the stovepipe systems previously found in the military intelligence and signal battalions) surfaced once the BSTB deployed. The signal company owned the SAMS–1, but was not authorized any automated logistical specialists (MOS 92A) to operate the system. The military intelligence company, on the other hand, was authorized one 92A but not any automated maintenance systems. Since the headquarters and headquarters company also did not have a SAMS–1 box, we merged the motor pool, the IEW repair section, and the signal maintenance section to form a mini-FSC, with the battalion maintenance technician acting as the shop officer. This reorganization, which was later submitted as a recommended change to the unit's modified table of organization and equipment (MTOE), greatly improved the unit's ability to track and report statuses and order repair parts.

The BSTB struggled with connectivity and had to scrounge a very small aperture terminal (VSAT) for dedicated logistics communications. The VSAT was eventually used to link all maintenance activities to the LOGSA using SAMS–2 (the command-level version of SAMS) and also to link the brigade logistics staff officer (S–4) and company supply rooms using the Standard Army Retail Supply System (SARSS) and Property Book Unit Supply–Enhanced (PBUS–E).

The BSTB needs an authorized welder with appropriate equipment. We cross-trained two Soldiers who deployed with limited civilian welding experience, but we were barely able to maintain our systems. It was a constant challenge to balance the welders' time between regular repairs and the upgrades that we were required to install on the up-armored high-mobility, multipurpose wheeled vehicles (HMMWVs). Additional mechanics and welders would have made it much easier to keep pace with repairs and upgrades and ultimately would have kept our Soldiers safer while they conducted missions.

The biggest maintenance concern in the BSTB was the operational readiness of our ECUs and generators—items that were critical to the accomplishment of the battalion's primary mission. The number of power generation equipment repairers (MOS 52D) and utilities equipment repairers (MOS 52C) was not sufficient. The BSTB is authorized two 52Ds and one 52C to maintain the brigade headquarters' two command posts, the signal company's Joint Network Node (JNN) system, and the plethora of heat-sensitive equipment owned by the military intelligence company. The BSTB used an extremely aggressive cross-training program to train additional Soldiers to help with these two critical areas. Through a combination of cross-training, a heavy reliance on contractors and spares located more than an hour away, and much luck, the BSTB was able to maintain the ECUs and generators that sustained the communications network. Had we experienced failures and been unable to travel the main supply routes, the brigade might have experienced blackout periods and degraded operations across the board.

Automotive maintenance was less of a problem, but that activity succeeded only through long hours, great leaders, and outstanding repair parts supply efforts from the support battalion. The additional company-sized units did not experience an exceptionally high operational tempo, so we were able to keep the units at a fairly high state of readiness. But without assistance from the nearby maneuver battalion's FSC, we would not have been able to sustain them for much longer than 60 days.

IEW and Signal Maintenance

The IEW repair section was led by an IEW equipment technician. We were lucky to have an experienced and knowledgeable officer who coordinated the cooperation of the IEW repair section and the signal company's special electronic devices repairer (MOS 94F). This collaboration, made possible through the Combat Service Support Automated Information System Interface (CAISI) and SAMS–1, was invaluable. The section completed more than 1,200 work orders on equipment ranging from intelligence systems to radios and night vision devices.

Photo by SGT Brandon Aird

Repair of TUAVs was a major challenge for the 2d Brigade Special Troops Battalion in Iraq.

Many of the military intelligence and signal companies' systems were COTS items and were under contracted maintenance programs. Unfortunately, because of the centralization of the contractors at the forward repair area, the dangerous roads in Iraq, and the limited number of seats on helicopters, the contractors' response time was often inadequate. Instead of waiting for those contractors, we chose to use assigned Soldiers who were trained and certified to repair more common intelligence platforms. Our IEW maintainer/integrators—who were capable of reading wire diagrams and schematics and troubleshooting systems—completed needed repairs in just hours. Surprisingly, repair parts were obtained fairly easily through normal supply channels.

The IEW repair section obtained certification to repair Dell computers and became the "go to" unit when computers and printers malfunctioned. They coordinated directly with Dell for repair parts that were still under warranty and saved countless hours that would have been spent sending the equipment to the centralized repair facility.

The section's work with counter remote-control improvised explosive device (IED) electronic warfare systems was one of the unit's most important accomplishments. The brigade received invaluable support from naval electronic warfare officers and field service representatives as these systems were installed and maintained. The IEW repair section worked hand in hand with these personnel and was quite capable of augmenting this effort. Unfortunately, established procedures prevented us from fully assisting with this mission, which degraded systems installation and repair. In keeping with Coalition Forces Land Component Command (CFLCC) policies for road worthiness of vehicles, commanders made tactical adjustments to missions and shared resources to overcome slowed installation and repair productivity.

One additional issue that must be addressed is the need to report the maintenance issues of systems unique to the military intelligence and signal companies. Many military intelligence and signal systems are COTS systems that are not in the Army's MMDF and cannot be reported through normal maintenance channels. The BSTB conducted an internal 4-week study of readiness reporting patterns and discovered that maintenance reporting for military intelligence systems Armywide was quite irregular and sometimes nonexistent. Since the Army does not appear to track certain military intelligence and signal systems using a current Standard Army Management Information System (STAMIS), brigade- and division-level maintenance managers must record maintenance issues on spreadsheets, which—unlike the STAMISs—do not provide any visibility to commanders on the battlefield.

Within the brigade, we were able to change parameters on our STAMISs either to load pacing items into the MMDF or to tag the equipment as maintenance significant. By changing the system parameters, we could view these systems on the brigade's deadline report from the SAMS–2 box. Unfortunately, that vision did not extend any higher than our brigade, so neither the division nor the contractors could assist without an e-mail or telephone notification. The second effect of not having the right items loaded into the MMDF was the inability to capture historical data on these systems. Repair part histories are needed to develop shop stocks, and manhour records are critical to force design. That data from our unit would be beneficial for designing and improving organizations, but it is not available.

TUAV Maintenance

The TUAV platoon was truly the eyes of the brigade; we tasked our Shadows with flying more than 1,900 hours during approximately 600 missions. The platoon's maintenance section is authorized four unmanned aerial vehicle (UAV) repairers, but we had three UAV repairers and three 52Ds with the additional skill identifier U2, which qualified them as short-range UAV repair technicians. These Soldiers, all with limited experience and below the rank of sergeant, were responsible for all preflight, postflight, scheduled, and unscheduled maintenance on the aerial vehicles. Each preflight and postflight sequence consumed a majority of their available time. This required help from the motor pool to maintain the platoon's generators, further adding to their burden and sometimes causing the commander to have to choose which piece of equipment was going to be repaired first—a TUAV, a signal generator, or the tactical operations center's generator.

Further adding to the stress was the fact that these repairers lacked the knowledge and experience—through no fault of their own—to properly manage TUAV maintenance and repair parts. Assistance from the battalion maintenance technician and IEW technicians helped, but only after we experienced several setbacks. The platoon's embedded field service representative was a conduit to the forward repair area located 2 hours away and made great contributions to the unit's operational readiness.

TUAVs were supported by Aviation, Avionics and Instrument Corporation. Maintenance and readiness were tracked using the Enhanced Logbook Automation System (ELAS), which—like the spreadsheets used to track other unique equipment—did not link with the Army's STAMISs. Again, the BSTB was able to establish visibility using our organic STAMISs by creating a TUAV repair shop in SAMS–1 and putting the system into the MMDF. Using the Unit Level Logistics System-Air (ULLS-A) was one possible solution, but that entailed configuring the SAMS–1 box to accept data from both air and ground systems. SAMS–1 has since been replaced by SAMS–Enhanced (SAMS–E), but there would be no significant difference between configuring SAMS–E and SAMS–1 for this purpose.

Summary

The BSTB is a unique and adaptable organization that can provide great flexibility and help a maneuver commander get the most out of the military intelligence company, the signal company, and all of the attached and assigned slices that arrive once a BCT is deployed. To fully capitalize on this asset, we believe that the United States Army Training and Doctrine Command's force designers should complete a thorough review of the BSTB's requirements versus their capabilities and should reorganize maintenance personnel to form a mini-FSC. This idea grows even more important as the Army is moving the brigade's two engineer companies from the combined arms battalions to the BSTB in the near future.

The 2d BSTB successfully provided signal and military intelligence support to the 2d BCT during its deployment to Operation Iraqi Freedom 05–07 by adapting and changing its organizational structure to meet the demands of the battlefield. The 2d BSTB supported 20 different elements, thanks to a laudable performance from the Soldiers and junior leaders of the battalion. The maintainers of the BSTB were primarily aided by aggressive contractors and a sister battalion's FSC, but many other people, units, and factors played a role in their success. Had the battalion experienced a higher intensity conflict or been required to relocate regularly, it would not have enjoyed such success because the lines of communication and the readily available spares would probably not have been as accessible.

The Army's logistics leaders, along with the intelligence and signal communities' leaders, must make sure that the vital COTS systems that provide commanders with the information and ability to shape the operational environment are properly loaded into the MMDF. The increased visibility of the operational readiness of these systems will allow logisticians at tactical, operational, and strategic levels to resupply, repair, or replace these important systems so that we can continue to push the enemy and keep our Soldiers safe. A few minor tweaks to this dynamic organization will greatly increase the BSTB's value as a combat multiplier and will provide commanders with the necessary information to continue to fight the enemy on our terms, using the technological advantages that help make our Army the best in the world.

Lieutenant Colonel Craft was the Executive Officer of the 2d Brigade Special Troops Battalion, 2d Brigade Combat Team, 4th Infantry Division, in Operation Iraqi Freedom 05–07. Commissioned as an ordnance officer, he has served as a combat developer and a maintenance company commander and in various logistics positions in assignments both in the continental United States and abroad.

Chief Warrant Officer Three Watkins was an intelligence and electronic warfare (IEW) maintenance technician for the 2d Brigade Special Troops Battalion during Operation Iraqi Freedom 05–07. He has served as an electronic systems maintenance technician in various units across the United States Army Forces Command, the United States Army Special Operations Command, and the United States Army Training and Doctrine Command. He has deployed to Iraq four times and is currently an IEW maintenance technician in the 3d Armored Cavalry Regiment.

Note: *The authors thank Colonel Richard J. Muraski, Jr., Chief Warrant Officer Two Sean Goodwin, and Command Sergeant Major Carl A. Curtice, USA (Retired), for their contributions to this article.*

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Operation Sand Castle 2008:
Taking It to the Next Level and Beyond

By Major Jon A. Brierton

The sun rises over Forward Operating Base (FOB) Santa Fe, located in "The Box" at the National Training Center (NTC), Fort Irwin, California, for another rotation of Operation Sand Castle, where the 412th Engineer Command serves as the action agent for the United States Army Reserve Command's current Army Force Generation exercise. A unique feature of this exercise is the requirement that the Active Army brigade combat team (BCT) and the Army Reserve brigade coexist in the same operational environment as they would in-theater. Each component has to adapt to the other, thus creating a mutually supporting relationship that yields an overall stronger fighting force.

However, the training that occurs between the two components is just the beginning. In addition to training individual Soldiers, Operation Sand Castle gives the Army a chance to exercise its newest operational structure. The 301st Maneuver Enhancement Brigade (MEB) from Fort Lewis, Washington, and the 210th Regional Support Group (RSG) from Fort Buchanan, Puerto Rico, are two new structures in the Army. This year's operation focused on emerging MEB and RSG doctrine and the dynamics that take place between the senior-level commands within a BCT's operational environment, executing full spectrum counterinsurgency operations. NTC provides the opportunity to test these structures as new doctrine is still being developed.

The 301st MEB and 210th RSG catapulted the exercise to the next level by planning, coordinating, and executing a robust training plan which, coupled with the desert environment and the NTC rotational scenario, resulted in conditions that resemble those in Iraq and Afghanistan. The 301st MEB—consisting of engineer, military police, and chemical battalions—coordinated with the 2d Heavy Brigade Combat Team, 1st Infantry Division (2/1 HBCT), from Fort Riley, Kansas, and controlled all operations off the FOB, while the 210th RSG controlled all operations on the FOB.

The 301st MEB operated in "The Box," coordinating and supporting 2/1 HBCT with mobility through its gap-crossing and route clearance capabilities and with horizontal and vertical engineer capabilities not resident in the BCT command structure. During an attack on the National Urban Warfare Complex (NUWC), known as *Medina Jabal*, the 301st MEB exercised its air space management and fires control capability by coordinating with the BCT close-air and fire support assets to mitigate the Opposing Force (OPFOR) attack. Within minutes, Apache helicopters were over the site, providing relief to the Operation Sand Castle units, and unmanned aerial vehicles circled the area to keep the OPFOR away.

Throughout the operation, the 301st MEB directed mounted combat patrols, route reconnaissance, route security, and mobility operations in a competitive environment while directing simultaneous construction operations at the NUWC, the mock village of *Medina Wasl* at Four Corners, the rock quarry, and the southeast corner of Area of Operation Bronco, along Alternate Supply Route Long Island. The mission at Four Corners was an extra project assigned when the 301st MEB hit the ground. This complex project consisted of constructing a 90-foot concrete traffic circle near *Medina Wasl*. The 365th Engineer Battalion tackled the project and when it was finished, the 301st, 2/1 HBCT, and the village mayor conducted a ribbon-cutting ceremony with townspeople attending the event as they would in Iraq.

NTC's mission is to prepare Soldiers, Sailors, Airmen, and Marines for deployment in support of the

"A unique feature of this exercise is the requirement that the Active Army brigade combat team (BCT) and the Army Reserve brigade coexist in the same operational environment as they would in-theater."

The mock village of *Medina Jabal* gives Soldiers a realistic taste of duty in Iraq.

War on Terrorism. The main focus of Operation Sand Castle is to prepare Army Reserve Soldiers for potential deployments, and the operational mission is to provide upgrades to NTC facilities and the NUWC, the premier training area for BCTs. Operation Sand Castle, now entering the fourth year of a planned ten-year operation, is improving the infrastructure of the NUWC to replicate conditions in Iraq and Afghanistan more accurately, so Soldiers have a better idea of what to expect when they deploy. This creates a twofold effect that provides Army Reserve Soldiers a training opportunity which greatly improves their tactical and technical skills, while simultaneously improving the infrastructure of the installation and enhancing the post's ability to train the total force for the future. This is made possible by having Operation Sand Castle units written into the rotational scenario under the watchful oversight of observer/controller-trainers (O/C-Ts). The 120th Infantry Brigade, 1st Army Division West, provided 58 O/C-Ts for the operation, helping to stage all the training events normally conducted by a BCT, to include situational training exercises and center of excellence training opportunities. The O/C-Ts coordinated for OPFOR and ran the mounted combat patrol and convoy live-fire lanes for the participating units.

Operation Sand Castle units experienced many indirect-fire attacks and civil disturbances not only at the FOB but also at the NUWC. While the units traversed the main supply routes, combat patrols were engaged by improvised explosive devices (IEDs) and vehicle-borne IEDs. Snipers attacked both the FOB and the various project sites. These key OPFOR engagements not only added to the realism of the exercise but also tested the units' battle drills and standing operating procedures (SOPs). The units are taking the lessons learned and improving their SOPs for use in-theater.

The Army Reserve is not the strategic force of the past but has transformed into an operational force. The number of units participating in Operation Sand Castle has tripled since its beginnings four years ago. This year the operation had more than 54 separate units, with more than 2,500 Soldiers on the ground experiencing the best training the Army has to offer. These motivated Soldiers established an FOB that provided all life support and sustainment requirements. For example, in addition to its measure-of-training-effectiveness mission to provide level one medical care to the task force at FOB Santa Fe, medical personnel from the 328th Combat Support Hospital also trained and certified 408 Soldiers as combat lifesavers and 17 as combat lifesaver instructors.

The Operation Sand Castle task force conducted more than 55 missions, encompassing force protection, route clearance and dry-gap-crossing mobility operations, quarry operations, and vertical and horizontal construction operations. The construction effort netted more than 26,000 tons of gravel and railroad ballast used in the construction of 11 pre-engineered buildings, 14 concrete masonry unit buildings, 8,900 feet of railroad bed, and more than 10,600 feet of roads. In addition, the 655th Asphalt Detachment repaired more than 400 meters of damage to the main supply route and helped resurface two parking lots in the cantonment area.

Operation Sand Castle units also conducted 29 individual and crew-served weapons, live hand grenade and live demolitions range sessions, and 30 situational training exercise lanes that covered mounted combat patrol; convoy live-fire; medical trauma; and chemical, biological, radiological, and nuclear tasks. The Soldiers have access to a myriad of outstanding training opportunities, such as the Joint Center of Excellence for IED Defeat. More than 180 Soldiers were trained on the latest tactics, techniques, and procedures for IED defeat; electronic countermeasures; route clearance; robotics; and entry control point and escalation-of-force operations.

Another notable first was the United Service Organizations (USO) show conducted at the midpoint of the exercise by a Hollywood comedian and two Los Angeles-area bands. This was the first time that a USO show was presented in "The Box" at NTC during a rotation. The show gave the troops a few hours of downtime to regenerate as they prepared to finish their aggressive combat and construction operational tempo and replicated the FOB experience.

This year, the Army National Guard was integrated into the training. As Operation Sand Castle continues to increase in size and magnitude, there are plans to invite the other branches of the Service for joint training. The way ahead is to eventually train with armed forces from other countries in an effort to fully match conditions in-theater. The 412th Engineer Command continues to raise the bar and take training to the next level in an effort to help our Service members survive and win the War on Terrorism.

Major Brierton is the chief of operations for the 412th Engineer Command. He has been the lead action officer for Operation Sand Castle for the last two years. He has deployed to Iraq as the assistant operations and training officer and battle captain of the 983d Engineer Battalion and has commanded a light engineer equipment company. He is a graduate of the Combined Arms and Services Staff School and holds a master's in organizational management from the University of Phoenix.

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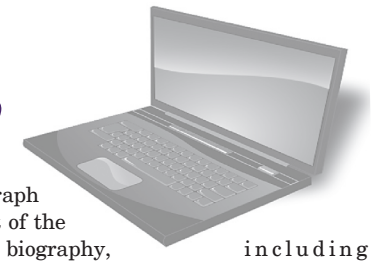
Writing for the Maneuver Support Magazine



The *Maneuver Support Magazine* is designed to provide a forum for exchanging information and ideas within the maneuver support community. We include articles on any of the multitude of capabilities, tasks, and processes associated with protection, movement, and mobility. Writers may discuss training, current operations and exercises, doctrine, equipment, history, personal viewpoints, or other areas of general interest to maneuver support personnel. Articles may share good ideas and lessons learned or explore better ways of doing things.

Articles should be submitted as double-spaced Microsoft Word documents. They should be concise, straightforward, and in the active voice. If they contain attributable information or quotations not referenced in the text, provide appropriate endnotes. Text length should not exceed 2,000 words (about eight double-spaced pages). Shorter after-action-type articles and reviews of books on maneuver support topics are also welcome.

Include photos (with captions) and/or line diagrams that illustrate information in the article. Please do not include illustrations or photos in the text; instead, send each of them as a separate file, with photos either in the .jpg or .tiff format. Do not embed photos in PowerPoint slides. If illustrations are in PowerPoint, avoid excessive use of color and shading. Save digital images at a resolution no lower than 200 dpi. Images copied from a website must be accompanied by copyright permission.

Provide a short paragraph that summarizes the content of the article. Also include a short biography, including your full name, rank, current unit, and job title; a few of your past assignments, experience, and education; your mailing address; and a fax number and commercial daytime telephone number.

Articles submitted to the *Maneuver Support Magazine* must be accompanied by a written release by the author's unit or activity security manager prior to publication. All information contained in the article must be unclassified, nonsensitive, and releasable to the public. The *Maneuver Support Magazine* may be distributed to military units worldwide and could be accessible to nongovernment or foreign individuals and organizations.

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Send submissions by e-mail to <*leon.msmagazine@conus.army.mil*> or on a CD in Microsoft Word to: Managing Editor, *Maneuver Support Magazine*, 464 MANSCEN Loop, Suite 2661, Fort Leonard Wood, Missouri 65473-8926.

Maneuver Support Update

Improvised Explosive Device Defeat (IEDD) Initiatives. During the last quarter, the Rapid Transition Division (RTD) of the Maneuver Support Center's Capability Development and Integration Directorate (CDID) was involved in several significant joint and Armywide IEDD initiatives. Within the RTD is TRADOC's IEDD Integrated Capabilities Development Team (ICDT), which is responsible for conducting doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) assessments; performing gap analyses identified in Headquarters, Department of the Army (HQDA), and joint urgent operational needs statements (JUONS); and coordinating home-station training programs of IEDD initiatives. The ICDT is also responsible for coordinating and facilitating the IEDD Council of Colonels (CofC) and General Officer Steering Committees (GOSC), which produce guidance and directives on Armywide IEDD training, initiatives, and systems.

During 4th quarter FY08, the ICDT conducted one In-Progress Review (IPR), one IEDD co-chair update, one IEDD CofC, and one GOSC for the Director of the Army Capabilities Integration Center (ARCIC). These meetings provided guidance and direction on current and future action plans in IEDD initiatives identified in the FY07 Armywide IEDD Training Strategy. The ICDT ensured successful obligation of all FY07 IEDD training strategy funding, greatly enhancing IEDD training and capabilities of deploying units. After receiving a DA directive, the ICDT—in coordination with United States Army Forces Command (FORSCOM) and several other Army service components—began developing an IEDD training circular (TC) that would serve as an enduring document, providing commanders with broad guidance on Armywide IEDD training that would not require annual updating. The TC will include a supplement that will identify DA G-3 approved annual funding requirements for IEDD initiatives. The TC and supplement are scheduled for release in February 2009.

The ICDT is also responsible for providing IEDD assistance to deploying units. This is done through the use of capability integration teams (CITs). The teams contact deploying units and provide commanders with a single source for locating the most current IEDD training resources. In addition, the teams coordinate IEDD mobile training teams (MTTs) on a wide variety of IEDD subjects. To date, the CITs have provided assistance to more than 3,500 deploying units and coordinated more than 1,060 IEDD MTTs.

Another area the ICDT is directly involved with is conducting DOTMLPF impact assessments in support of DA G-3. These assessments identify the DOTMLPF areas and the extent of the impact of fielding these nonstandard material systems and sustainment requirements. To date, 189 assessments have been completed.

The point of contact is Mr. Joe Toth, (573) 563-7821, or <*joseph.toth1@us.army.mil*>.

Force Development. The main organizational development efforts over the last several months have revolved around Total Army Analysis (TAA) 10-15, which recommends reductions or realignments of chemical, engineer, and military police personnel and organizations due to Grow the Army structure being placed on hold. This work was supposed to be completed by December 2008, but we do not expect an approved course of action until late February 2009. A parallel effort in United States Army Training and Doctrine Command (TRADOC) is also redesigning the brigade combat team, division, corps, and Army service component command staffs. Once the TAA is complete, the Organizations Branch of the United States Army Maneuver Support Center's (MANSCEN's) Capability Development and Integration Directorate will focus on force design updates that address maneuver support equities within the functional branch organizations. Work has started on the 2009 Table of Organization and Equipment Unit Reference Book that provides detailed descriptions of chemical, engineer, and military police force structure. The new book will not be available until 3d quarter FY09, but the 2008 version is still available to E-7s and above (others by acceptation) at <*https://www.us.army.mil/suite/kc/8587909*>.

The point of contact is LTC Steve Danner (573) 563-6282 or <*stephen.danner@us.army.mil*>.

Future Capabilities Development. The United States Army Maneuver Support Center (MANSCEN) continues as the joint lead of the Integrated Unit Base and Installation Protection (IUBIP) Capabilities-Based Analysis (CBA), by completing the Interoperability and the Detect, Assess, and Defend Initial Capabilities Development Documents for the Joint Staff. Work has

begun on the doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change requests as they relate to the study. The Military Working Dog (MWD) CBA team is preparing to brief their findings to the Vice Chief of Staff of the Army in March 2009. The MWD CBA assesses the Army's MWD program, to include capabilities such as the specialized search dogs and the combat tracker dogs. MANSCEN continues as the TRADOC lead for the Maneuver Support, Combating Weapons of Mass Destruction (CWMD), and Base Camps Concept Capability Plans (CCPs). The Concepts Development Division of MANSCEN's Capability Development and Integration Directorate and the Military Police School briefed the Future Combat System (FCS) General Officer Integrated Concept Team (ICT) at Fort Bliss, Texas, in December 2008. Topics included maneuver support, protection, detainee operations, and nonlethal capabilities.

The point of contact is Mr. Ken Garrett, (573) 563-7889 or <*kenneth.garrett@us.army.mil*>.

Explosive Ordnance Disposal (EOD) Integration/ Fusion Division. The United States Army Maneuver Support Center's (MANSCEN's) Capability Development and Integration Directorate (CDID) EOD Integration/ Fusion Division leadership position is now filled by an EOD colonel (COL), based on agreements between the MANSCEN Commanding General and the Chief of Ordnance. COL James Shivers reported in from the Army War College in July to be the first to fill the new position, and Lieutenant Colonel Bill Fiske departed to become the commander of the Provisional EOD Training Battalion. The EOD Integration Division is currently filled by COL Shivers and two contractors. Among the areas that are keeping the EOD Fusion Division busy are supporting the Improvised Explosive Device Defeat (IEDD) Integrated Concept Development Team (ICDT) in numerous capability areas and ensuring that the EOD community is linked into the improvised explosive device (IED) ICDT efforts. COL Shivers went to Kuwait in August for the United States Army Central (USARCENT) IEDD conference and to Virginia for the Army Asymmetric Warfare Office conference to ensure that MANSCEN EOD was represented. In addition, the EOD Fusion Division supported reviews of new technology being studied for TALON® robots, to include stereovision cameras and improved software to control the robot. Other reviews supported concerned the use of various technologies to provide a standoff detection capability for explosives/IEDs. Ongoing efforts being supported by the EOD Fusion Division also include the study of the Operational Support Command and potential impacts to EOD command and control, along with supporting MANSCEN Future Combat System (FCS) experimentation impacts regarding EOD. Future trips are to the Ukraine 143d Demining Center and to Eglin Air Force Base for the Army Asymmetric Warfare Office EOD Conference. In addition, to ensure synergy of efforts with the United States Army Combined Arms Support Command (CASCOM) EOD doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) personnel, we have reinitiated the EOD Working Group.

The point of contact is COL James Shivers, (573) 563-8233, or <*james.shivers1@us.army.mil*>.

Results of the Core Mission Essential Task List (CMETL) Review Board. The Combined Arms Command held its biannual CMETL Review Board on 1 October 2008, with the purpose of ensuring that CMETLs remain synchronized with the—

- Strategic environment as defined by the Chief of Staff of the Army's "Training and Leader Development Guidance."
- Table of organization and equipment (TO&E) design.
- Technically correct expression of tasks.
- Appropriate expression within the overall CMETL task taxonomy.

The United States Army Maneuver Support Center (MANSCEN) presented one issue to the CMETL Review Board—the addition of "Conduct Stability Operations" to the Core Capabilities Mission Essential Tasks (CCMETs) for a maneuver enhancement brigade (MEB). This task was not part of the original MEB CMETL that was staffed to the Department of the Army. Through the doctrine development process, the CCMET "Conduct Stability Operations" was identified as a critical mission task for the MEB. The MEB is optimized to conduct stability operations, and the unique breadth and capabilities of its staff and the likely mix of units make it a preferred headquarters to conduct stability operations. Since an MEB is a combined arms organization that is task-organized based on mission requirements, the MEB can be optimally tailored with the requisite force structure to provide the required support for stability operations. The MEB "Conduct Stability Operations" CCMET will include the following subcategories of primary stability tasks:

- Establish civil security
- Establish civil control
- Restore essential civil services

The CMETL review board approved MANSCEN's recommendation by acclamation. The results of the board were briefed for approval at the Department of the Army Training General Officer Steering Committee meeting on 16-17 December. The addition to the MEB's CCMET was unanimously approved.

The point of contact is Mr.Gordon Bierschenk, (573) 563-2720, or <*gordon.j.bierschenk@us.army.mil*>.

In-Progress Update of 01C Leader Development Strategy. The United States Army Maneuver Support Center (MANSCEN) Directorate of Training continues to work at creating a leader development strategy for officers assigned to maneuver support positions. The strategy is due for completion in July 2009. Advancia Corporation was selected as a contract partner in this endeavor. The team is currently analyzing courses of action that will serve as the framework for this strategy, which will track officers' training throughout their careers.

The point of contact is Ms. Donna Grzyb, (573) 563-4121, or <*donna.grzyb@us.army.mil*>.

United States Army Maneuver Support Center (MANSCEN) Leader Development. Leader development continues to be at the forefront of the MANSCEN mission. As the proponent for the maneuver enhancement brigade (MEB) and the brigade special troops battalion (BSTB), MANSCEN continues to develop and provide opportunities for leaders at both brigade and battalion levels to enhance their understanding of maneuver support and its critical role during full spectrum operations. While many organizations and individuals are involved with and critical to the MANSCEN leader development mission, the Maneuver Support Training Division (MSTD) of the MANSCEN Directorate of Training's (MDOT's) Department of Career Studies (DoCS) is responsible for coordinating and administering the MANSCEN Precommand Course (PCC) program.

MANSCEN currently conducts six PCCs per year—four for BSTB commanders and two for MEB commanders. These courses can and do run concurrently, not only with each other but also with the three functional MANSCEN PCCs of the United States Army Chemical, Biological, Radiological, and Nuclear School (USACBRNS); the United States Army Engineer School (USAES); and the United States Army Military Police School (USAMPS). Each MANSCEN PCC has its own branch-specific training schedule and therefore brings in its own subject matter experts (SMEs) as instructors from throughout the Army and its centers of excellence (COEs). The unique organization and mission sets of the MEB and BSTB require their leadership to possess an understanding of several functional capabilities that are either organic to their organization or that they may find attached or assigned to them for a mission and which do not reside at MANSCEN.

The MANSCEN Commanding General (CG) and the Commandants of the three MANSCEN schools all brief and discuss their specific branch capabilities and provide a one-on-one opportunity for the PCC students to gain a unique insight into their branch organizations, training, and junior leader development. To help the MEB and BSTB commanders gain a better appreciation and understanding of those capabilities outside of MANSCEN, the MANSCEN PCCs bring in SMEs from the following schools and centers: Military Intelligence, Signal, Civil Affairs, Psychological Operations, Aviation, Field Artillery, and Air Defense Artillery; maneuver support teams from the Combined Arms Center (CAC) Battle Command Training Program; combat training center (CTC) representatives; as well as guest speakers and former commanders of brigade combat teams (BCTs), MEBs, and BSTBs.

To further the training opportunities for MEB commanders and their staffs, MANSCEN also provides support to Army National Guard MEBs during weekend drill periods and annual training (AT) periods. While MANSCEN continues to send teams TDY to assist with weekend drill periods, any AT period that requires digital or simulation support must occur at MANSCEN. For FY09, five MEBs currently plan to conduct their ATs at MANSCEN.

MANSCEN continues to explore new ways to help the Army and its maneuver support organizations with leader development. As part of the BCT Commander's Development Program (BCTCDP), the MANSCEN CG and the three MANSCEN Commandants or their representatives travel to Fort Leavenworth and provide the BCT commanders with a full day of maneuver support-specific briefings and instruction, and the MANSCEN leadership gains a better understanding of what the BCT commanders require and expect from maneuver support organizations that will be a part of their task organization. This information can then be passed on to MEB and BSTB commanders who attend MANSCEN PCCs. Other opportunities being looked at include attempting to align MANSCEN PCCs with the MANSCEN Captains Career Course (CCC) Capstone Warfighter Exercises (WFX) in order to provide an opportunity for maneuver support commanders to mentor and interact with CCC students.

As we enter 2009, MANSCEN continues to push forward with its critical mission of developing the Army's maneuver support leadership. We continue to solicit and receive information on how to better equip our leaders with the tools and education necessary to plan and execute maneuver support operations. We welcome this input and encourage all to contact us and provide us with your thoughts and ideas on how we can better serve you.

The point of contact for Maneuver Support Leadership and its PCC program is Mr. Robert McFarland, (573) 563-3025, or <*robert.mcfarland@us.army.mil*>. Questions specific to the PCC program and its schedules should be directed to Mr. Frank Webb, (573) 563-5502, or <*frank.e.webb@us.army.mil*>.

MANSCEN Doctrine Update

U.S. Army Maneuver Support Center
Training and Doctrine Development Department
Doctrine Division

Publication Number	Title	Date	Description (and Current Status)
Publications Currently Under Development and/or Revision			
FM 3-90.31	*Maneuver Enhancement Brigade Operations*	26 Feb 09	The MEB is designed as a command and control headquarters with a robust multifunctional brigade staff that is optimized to conduct maneuver support operations. As one of the five multifunctional brigades, the MEB is designed first to support division operations—but also echelon-above-division operations within the Army, joint, and multinational command and control structures—as well as responding to state or federal authorities as a part of civil support operations. **Development Highlights:** Key tasks (Conduct Maneuver Support Operations, Conduct Support Area Operations, Conduct Consequence Management Operations, and Conduct Stability Operations.) **Status:** Published 26 February 2009.
FM 3-10	*Protection*	Pending (New Manual Under Development)	This is an Army keystone field protection manual that will establish doctrine for the protection warfighting function. It will expand on the protection concepts outlined in FM 3-0, *Operations*, to incorporate a broader approach to protecting the force. This manual establishes the Army's position on how to integrate and synchronize protection systems into operations. It also provides roles and responsibilities for the protection cell/group within the division, corps, and Army headquarters for planning, executing, and assessing protection operations. **Development Highlights:** Protection warfighting function, 12 protection tasks, principles and forms of protection, and the protection planning process. **Status:** Adjudicating received comments from the mid-November staffing. The publishing date depends on adjudication and DA Form 260 approval (estimated as late May 2009).

NOTES: Current (approved) publications can be accessed and downloaded in electronic format from the Reimer Digital Library at <*http://www.adtdl.army.mil*>. The manuals discussed in this matrix are currently under development. Drafts may be obtained during the staffing process or by contacting the MANSCEN Doctrine Division at: Commercial (573) 563-7332, DSN 676-7332 or <*les.hell@us.army.mil*>.

Top 10 MANSCEN Capabilities Development Priorities

1. Explosive/Toxic Hazard CBRNE Defeat
2. Maneuver Support Concepts, Organizations, and Systems
3. Protection
4. Consequence Management
5. Stability Operations, Infrastructure Development, and Nation Assistance
6. Detainee Operations
7. Nonlethal Capabilities
8. Joint Functional Capabilities (JFC)
9. Geospatial
10. Future Mobility and Support System

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