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PRECISION GUNNERY

ARMOR

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Editor in Chief
LISA ALLEY

Commandant
BG THOMAS S. JAMES JR.

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Official:


JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
1206506

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Armor School Points of Contact

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ARMOR Editorial Offices

Editor in Chief
Lisa Alley (706) 545-9503
Email: lisa.alley@us.army.mil DSN 835

Deputy Editor
Erin Wold (706) 545-8701
Email: erin.wold@us.army.mil DSN 835

Art Director
Jody Harmon (706) 545-5754
Email: jody.harmon@us.army.mil DSN 835

Editorial Assistant
Jenny Forte (706) 545-2698
Email: jenny.forte@us.army.mil DSN 835

U.S. Army Armor School

Commandant (ATZK-DF)
BG Thomas S. James Jr. (706) 545-2029
Email: thomas.james@us.army.mil DSN 835

Interim Deputy Commandant (ATZK-DF)
LTC Antonio D. Austin (706) 545-3815
Email: antonio.austin@us.army.mil DSN: 835

Armor School Command Sergeant Major (ATZK-CSM)
CSM Miles S. Wilson (706) 545-2029
Email: miles.s.wilson@us.army.mil DSN 835

192nd Infantry Brigade (ATSH-BC)
COL Ronald P. Clark (706) 544-8623
Email: ronald.p.clark@us.army.mil DSN 784

194th Armored Brigade (ATZK-BAZ)
COL Kevin S. MacWatters (706) 626-5989
Email: kevin.macwatters@us.army.mil DSN 620

316th Cavalry Brigade (ATZK-SBZ)
COL Marshall K. Dougherty (706) 626-8105
Email: marshall.dougherty@us.army.mil DSN 620

Office, Chief of Armor (ATZK-AR)
George DeSario (706) 545-1352
Email: george.desario@us.army.mil DSN 835

COMMANDANT'S HATCH

BG Thomas S. James Jr.
Commandant
U.S. Army Armor School



Future Hybrid Threats

As the treadmill of deployments slows down and we look at lessons learned from our fight in Iraq and Afghanistan, it is critical to understand that our threats will continue to evolve and present an even more dynamic future operating environment comprised of complex networks and sophisticated weapons pushed to lowest levels. Our situation today bears many similarities to what the Israeli Defense Forces faced in 2006. The IDF was proficient and experienced with counter-insurgency when Hezbollah, employing hybrid tactics, handed them an unanticipated aggressive fight. What the IDF faced in Lebanon reinforces the fact that extensive combat experience in one form of warfare does not translate to a force's universal effectiveness, a fact echoed in the Army's publication *Training Units and Developing Leaders*.

The IDF's 2006 experience also reminds us that high-intensity combat "is not so much about scale (i.e., battalion or brigade force-on-force engagements) as about the qualitative challenges a hybrid threat can pose," according to Dr. David E. Johnson in his study *Preparing and Training for the Full Spectrum of Military Challenges: Insights from the Experiences of China, France, the United Kingdom, India and Israel*, published by RAND Corporation in 2010. The IDF did recover from this setback through their subsequent refocus towards restoring high-intensity, combined-arms capabilities; this blending of combined-arms capabilities with their irregular warfare expertise produced effective results and a much-improved performance against their hybrid opponents in Gaza during 2008, as Johnson notes.

The Army will most likely face a hybrid threat in the future. A hybrid threat is the diverse and dynamic combination of regular forces, irregular forces, terrorist forces, criminal elements, or a combination of these forces and elements all uni-

fied to achieve mutually benefitting effects. Hybrid threats may involve nation-state adversaries that employ protracted forms of warfare, possibly using proxy forces to coerce and intimidate, or non-state actors using operational concepts and high-end capabilities traditionally associated with nation-states. Johnson's study indicates that hybrid opponents demand "a joint, combined-arms approach that enables integrated fire and maneuver, particularly in complex terrain and in military operations among the people."

COL Gian Gentile, director of the military history program at West Point, predicts that future requirements demand ground forces capable of contested forcible entry operations into austere theaters and joint capability to sustain operations within non-linear battlespace. Our forces should expect to confront multiple adversaries, normally hidden within the population, in countries with little or no state control, according to Nathan Freier in his report *U.S. Ground Force Capabilities through 2020* (accessible at http://csis.org/files/publication/111116%20-%20Freier_USGroundForces_Web.pdf) and also outlined in the Army's *The United States Army Operating Concept*. For those who believe the world has progressed beyond fast-moving conventional armies facing-off, recall the 2008 situation where Georgian infantry was under intense fire from advancing Russian armor formations.

The U.S. Army will continue to require armored formations that will be both increasingly unique globally and essential for a wide range of contingencies, as Freier's report and COL Gentile, in his article "Let's Build an Army to Win All Wars," published in the January 2009 edition of *Joint Forces Quarterly*, point out. Armored maneuver forces (e.g., armored and armor-protected infantry and tanks) will remain more important than many envision. Although U.S. Army armored ma-

neuver forces may not currently have a peer competitor for the massed armies type of scenarios for which they were originally designed, our recent combat experience has proven that the firepower and protection inherent with these maneuver units is also crucial for ground-force success in most of the operations we will face.

GEN Martin Dempsey, chairman of the Joint Chiefs of Staff, indicates that the force's success in the future requires that our formations are "proficient in more than combat, and must remain versatile to conduct security, engagement, relief and reconstruction." (See the Joint Chiefs of Staff white paper, *America's Military – A Profession Of Arms: White Paper*, dated Feb. 23, 2012, <http://www.cannon.af.mil/shared/media/document/AFD-120229-062.pdf>.) He also emphasizes that ground forces proficiency within major combat operations (as well as in the tasks and skills more closely associated with other forms of operations) atrophies without routine practice. Without doubt, the present force possesses extensive combat experience and demonstrated abilities at adapting under a diverse array of complex and stress-packed situations. However, to avoid repetition of the unwelcome reality check that the Israelis experienced in 2006, our leaders, Soldiers and units must also be able to blend MCO competencies with irregular warfare and stability operations prowess.

As Armor and Cavalry leaders, we must focus our formations to effectively face

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GUNNER'S SEAT

*CSM Miles Wilson
Command Sergeant Major
U.S. Army Armor School*



Today's Armor Force – Armor Strong!

Greetings to all Cavalry troopers, Armor Soldiers, noncommissioned officers and officers across the total Army. I'm honored to have been selected as the U.S. Army Armor School command sergeant major, "Thunderbolt 7." More importantly, I'm humbled by the opportunity to serve each and every one of you. My thanks to BG Thomas James for having the faith and confidence to select me for this awesome opportunity to serve the best Soldiers in the world. I'd be remiss if I did not publically thank all the Soldiers, peers and leaders who have mentored, guided and supported me throughout my career. Thank you!

It's great to be back at the Armor School. I was fortunate to serve as a 19D Advanced Noncommissioned Officer Course small-group leader, 19D Basic Noncommissioned Officer Course branch chief and Primary Leader Development Course first sergeant. Though I have only been here for a short time, I can quickly report that the Armor School is in great shape at our new home in Fort Benning as we, with our Infantry School partners, are part of a great Maneuver Center of Excellence team. I have been very impressed with the new world-class training facilities and the great Southern hospitality of the Fort Benning/Columbus, GA, community.

For the last 10 years I've been in the operating force serving as a tank company,

brigade recon troop and headquarters and headquarters company first sergeant, and as Cavalry squadron and Armor brigade combat team command sergeant major. Through my multiple deployments to Operation Iraqi Freedom /Operation New Dawn, I have been the beneficiary of the great Soldiers, troopers and leaders the Armor School has educated and trained for the operational force while at war. I am committed to sustaining these high-level graduates at every level. I will strive for excellence in all aspects of the generating force – from doctrine to schools to training strategy – to ensure that we are fully supporting the operational force while at war and that we are prepared to answer our nation's next call to action, wherever that may be.

I will use this forum to share my experience, information, insight and the state of the Armor force. For example, the Armor School is hosting the first annual Sullivan Cup, the best tank-crew competition, May 7-11. We currently have 15 crews coming to Fort Benning for the competition as we recognize excellence in a critical component of the armored mounted force: precision gunnery. Congratulations go to the 281 outstanding 19D/19K staff sergeants who were recently selected for promotion from the sergeant first class board. I am sure these leaders are anxious and ready to demonstrate their potential at the next level.

Please do not hesitate to contact me or someone at the Armor School if you have any questions or concerns on a subject related to the Cavalry and Armor force. For now, I just want to take the opportunity to thank all of you and your families for your service to the nation, dedication to duty and sacrifices for the freedom of all. Every day I am amazed at the sheer volume of the great things our troopers, Soldiers, junior leaders and senior leaders of the Armor force accomplish across the globe. You are the best of the best!

In closing, I want to publicly thank CSM Ricky Young for his outstanding leadership of the Cavalry and Armor force not only the last three years as Thunderbolt 7, but during his entire career. Best wishes to you and your family as you embark on the next phase of your life.

Let us also never forget those who have paid the ultimate price and can no longer be with us, and all those great Americans currently serving in harm's way.

'Til we all ride again.

Armor Strong!

Armor Metrics: Applying Lessons from the Statistical Revolution in Sports to Better Train Soldiers at the Company Level

by CPT Michael B. Kim and SPC Mark S. Rothenmeyer

Moneyball, a book by Michael Lewis about Billy Beane and the Oakland Athletics, hit the top of the *New York Times* best-seller list in 2003.¹ Unable to compete financially with major market teams such as the New York Yankees and the Boston Red Sox, Beane and his staff used advanced statistics to increase efficiency in evaluating the effectiveness of players. Their evaluation tools produced results that questioned many of the long-held beliefs in professional baseball and sparked a statistical revolution that brought modernized and analytical performance measures from the periphery to the forefront of every managerial office.

“Sabermetrics,” defined by founder Bill James as the “search for objective knowledge about baseball,” questioned the traditional measures of baseball skill and attempted to create new methods to better determine the value and efficiency of players.² General managers no longer assessed players based on “baseball card” statistics such as batting average or runs batted in, but on statistics such as on-base plus slugging and runs scored, hence a much more efficient individual measure.³ Once the territory of “stat geeks” who resided in the periphery of professional sports, these statisticians have cemented their place in every major sport and contributed greatly to the success of professional teams.

The task is clear: If statistical analysis is at the cutting edge of industry standards and proven to be a successful evaluation tool

in corporate America, Wall Street and now professional sports, it is evident that Armor leaders must assess the lessons learned from statistical analysis and seek to apply methods to better train and evaluate their own units.

This article serves to argue the use of statistical analysis in Armor companies. Using statistical analysis, Armor leaders can:

- Better assess the proficiency of Soldiers and tailor training according to their weaknesses;
- Provide leaders the tools necessary to best place and use Soldiers throughout their fighting force; and
- Create an environment of competition and esprit de corps that drives and motivates Soldiers to become the best at their given positions.

Tragedy and opportunity

As the U.S. Army’s only forward-deployed committed division, the 2nd Infantry Division’s posture to “fight tonight” is amplified and reinforced by recent events on the Korean Peninsula. A North Korean weapon system attacked and sank the Cheonan, a South Korean Navy ship carrying 104 personnel, off the country’s west coast March 26, 2010, killing 46 seamen.⁴ The bombardment of Yeonpyeong Nov. 23, 2010, put 2nd Infantry Division on its highest alert since the Korean War ended; the artillery engagement between the North Korean military and South



Korean forces resulted in two Republic of Korea Marines killed in action, two civilian deaths and 18 people wounded.⁵

The 2nd Infantry Division stands to deter North Korean aggression. Should deterrence fail, however, it trains to repel North Korean forces using conventional warfare. As such, this places greater focus on soldiers, noncommissioned officers and officers to become tactically and technically proficient on M1 Abrams tanks. The operating environment in the Middle East has shifted the training focus of Armor units to non-conventional and counterinsurgency core competencies (and rightly so). However, with the threat on the Korean Peninsula, 2nd Infantry Division Armor units have the opportunity to concentrate on the maneuvering and firing of M1 Abrams tanks.

The challenge

As company commander of Company C, 1st Battalion, 72nd Armor Regiment, the fielding of the M1A2 System-Enhancement Package tanks provided a unique opportunity to implement a gunnery training and evaluation system from the ground upward. I challenged my master gunners, SSG Zachary Siemers and SSG Donald Fermaint (who replaced SSG Siemers halfway through this trial), to help me use the lessons-learned from the statistical revolution in sports to develop new methods to augment the assessment tools provided in the 1st Heavy Brigade Combat Team gunnery manual (Field Manual 3-20.21).

The operator new-equipment training process allowed us to create, implement and experiment with new assessment tools that would give us a better evaluation of each tank crewmember. Due to the complexity of the task and the limited time allotted during the OPNET process, assessing “gunners” became the priority of focus. Garnering lessons learned and trends from the statistical revolution in sports, we created “gunner statistics” to rate and evaluate individual gunners.

The need

As a company commander or company master gunner, many of our assessments of individual Soldiers are subjective. An evaluator is limited in the tools he can use to analyze and assess gunner performance. We simply assess a gunner’s value based on previous gunnery scores and subjective assessments. Ask a first sergeant or platoon sergeant who the top four gunners are in a company, and his answer is 80 percent subjective. It’s based on instinct or preference, not any analytic tools or evaluations. Perhaps he is accurate in his assessment, but that does not excuse the fact that there is not a systematic and objective approach in evaluating gunners. A gunner’s previous gunnery score has many additional variables that may not accurately reflect the gunner’s current capabilities. What about a company’s seventh or 10th best gunner? The company commander and master gunner do not currently possess the tools needed to evaluate each of their gunners.

The method

The primary challenge in this process is twofold:

- To determine evaluation criteria that best captures gunner proficiency; and
- To implement subjective assessments into an objective equation to account for crew chemistry and teamwork.

Defining “gunner proficiency” turned out to be a learning process for the command team. It provided an opportunity to determine what an Armor company requires of its gunners. Wading through all the additional tasks and requirements asked of an M1A2 SEP gunner, we determined the following four variables were the most important:

- Speed in acquiring targets;
- Accuracy in hitting targets;
- Consistency in destroying targets; and
- Tactical/technical competency.

The bottom line is that the gunner must obtain and destroy the enemy.

The most challenging aspect in defining gunner proficiency is to quantify subjective variables such as team chemistry into the equation. In *The Book of Basketball*, Bill Simmons refers to chemistry in a team as “the secret.”⁶ Given to him by Hall of Famer Isaiah Thomas, the premise is that relationships and chemistry on a team contribute just as much, if not more, to an organization’s success than actual individual skill. Statistical analysis approaches evaluations from an objective point of view; it acknowledges that there are undefined or immeasurable variables in play. This is not a statement of impossibility; the fact is, tools have not yet been generated to quantify certain attributes.

It is very clear to me, as a company commander in the U.S. Army, that morale, esprit de corps and teamwork are essential to mission success. Those terms subjectively measure the mood or attitude of a unit. Instead of ignoring “the secret” completely, we have tried to implement a quantitative evaluation with the caveat that capturing 50 percent of its significance is better than ignoring it completely. Everything considered, we developed the following equation:

$$\text{Speed} + \text{accuracy} + \text{consistency} + \text{competency} + \text{chemistry} = \text{gunner proficiency}$$

We understand that no equation will encompass all that is required of an M1A2 SEP gunner. The equation will have shortcomings, pitfalls and possible errors. However, the equation was developed with the attitude that an assessment, even if slightly flawed, gives the company commander a better evaluation tool than what currently exists.

Speed. We defined speed as target acquisition and kill time. TA is the ability of the gunner to scan and identify targets. KT is defined by the time in between target identification and destruction. For example, if it took the gunner eight seconds to identify the target and 20 seconds to destroy the target, KT is 12 sec-

SPEED				
	Target acquisition	Rank	Kill time	Rank
Gunner 66	8.632	2	10.31154	1
Gunner 65	10.286	6	12.10348	7
Gunner 11	11.452	12	13.54423	11
Gunner 12	10.976	10	11.08654	5
Gunner 13	10.484	8	19.73269	14
Gunner 14	8.912	4	10.59423	2
Gunner 21	11.1375	11	13.70192	12
Gunner 22	9.225	5	12.512	8
Gunner 23	10.356	7	10.60577	3
Gunner 24	12.224	14	16.06154	13
Gunner 31	8.736	3	12.85769	10
Gunner 32	12.019	13	11.8734	6
Gunner 33	7.284	1	12.63462	9
Gunner 34	10.847	9	10.9873	4

Figure 1. Mean values and rankings for TA and KT.

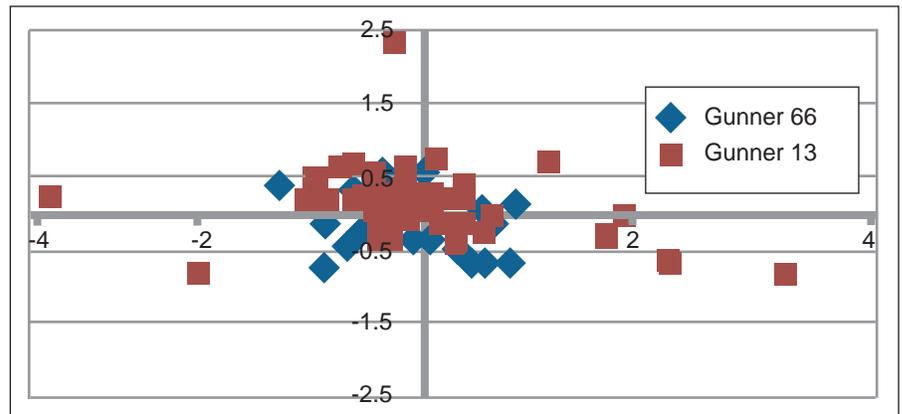
ACCURACY				
	Azimuth	Rank	Elevation	Rank
Gunner 66	-0.00673	2	-0.03192	5
Gunner 65	0.09746	9	-0.07428	10
Gunner 11	-0.09373	8	-0.00118	1
Gunner 12	-0.12423	12	-0.07596	11
Gunner 13	-0.0175	3	0.108542	13
Gunner 14	-0.11	10	0.007885	3
Gunner 21	0.113469	11	0.046939	8
Gunner 22	-0.1974	14	0.0112	4
Gunner 23	0.122308	13	-0.00788	2
Gunner 24	-0.0414	5	0.0522	9
Gunner 31	0.0248	4	0.1176	14
Gunner 32	0.06972	7	0.09174	12
Gunner 33	-0.0327	1	-0.01077	7
Gunner 34	0.04659	6	-0.04239	6

Figure 2. Mean azimuth/elevation values and rankings for accuracy.

SPEED		ACCURACY	
	Kill time	Azimuth	Elevation
Gunner 66	10.311543846	-0.00673	-0.03192
Gunner 65	12.10348	0.09746	-0.07428
Gunner 11	13.54423077	-0.09373	-0.00118
Gunner 12	11.086543846	-0.12423	-0.07596
Gunner 13	19.73269231	-0.0175	0.108542
Gunner 14	10.59423077	-0.11	0.007885
Gunner 21	13.70192308	0.113469	0.046939
Gunner 22	12.512	-0.1974	0.0112
Gunner 23	10.60576923	0.122308	-0.00788
Gunner 24	16.06154386	-0.0414	0.0522
Gunner 31	12.85769231	0.0248	0.1176
Gunner 32	11.8734	0.06972	0.09174
Gunner 33	12.63461538	-0.00327	-0.04077
Gunner 34	10.9873	0.04659	-0.04239

Figure 3. Analyzing speed and accuracy concurrently.

Figure 4. Impact points of Gunner 66 and Gunner 13.



onds. We decided that the importance lies most in the gunner’s ability to destroy the target once he acquires the target.

Accuracy. Accuracy is straightforward. We observed the point of impact on a target and measured its distance from center mass. The mean azimuth and elevation values on specific engagements gave us a good assessment of a gunner’s accuracy.

Consistency. We measured the consistency or “shot group” of each gunner by determining the standard deviation of targets on similar engagements.

Competency. The master gunner developed a 50-question multiple-choice test based on the 1HBCT gunnery manual (FM 3.20-21) and the 19K Skill Level 20 manual. We gave this test without allowing the gunners to study to capture their current tactical and technical competence.

Chemistry. The most difficult variable to quantify, we conducted a survey among the gunner’s crew, the gunner himself and the gunner’s leadership. The following survey used a scale of 1-10:

- **Crew assessment:**
 - Gunner’s competency: 1-10
 - Gunner’s leadership: 1-10
- **Self-assessment:**
 - Competency: 1-10

➤ Leadership: 1-10

• **Leadership assessment** (each platoon leader/platoon sergeant assessed their own gunners; the commander/first sergeant/master gunner assessed all 14 gunners):

- Gunner’s competency: 1-10
- Gunner’s leadership: 1-10

For each variable of the equation, we rated the gunner’s performance from 1-14, with 14 being the highest. For “the secret” variable, we took the mean of the total scores and applied the following scale:

Score of 10 = +14; score of 9 = +12; score of 8 = + 10; score of 7 = +8; score 6 and lower = +6

The process

With the method in place, the challenge now was to collect data. In addition to the required training provided by the 1HBCT gunnery manual, we decided that the Advanced Gunnery Training System was the best tool to collect the data. In the past, crews who conducted unit conduct-of-fire trainer or AGTS exercises did nothing more than file or discard the printed worksheets. When was the last time leaders manipulated data provided by the system or used it as an evaluation tool? Most of the

CONSISTENCY				
	STD DEV AZ	Rank	STD DEV EL	Rank
Gunner 66	0.77494015	6	0.3486728	9
Gunner 65	0.72398746	4	0.3792348	10
Gunner 11	0.73016974	5	0.3260162	8
Gunner 12	0.49706332	1	0.2924559	4
Gunner 13	1.17426754	13	0.5422176	14
Gunner 14	0.79300372	7	0.2790062	2
Gunner 21	1.17857356	14	0.0469388	1
Gunner 22	0.62948573	2	0.310849	6
Gunner 23	0.86360988	10	0.3168184	7
Gunner 24	0.82613931	9	0.2814198	3
Gunner 31	1.05045032	12	0.4420895	13
Gunner 32	1.0234987	11	0.4234988	12
Gunner 33	0.70011686	3	0.2972346	5
Gunner 34	0.82349876	8	0.3918723	11

Figure 5. Mean standard deviation values and rankings.

	STD DEV AZ	STD DEV EL	Azimuth	Elevation
Gunner 66	0.774940152	0.348672769	-0.00673	-0.03192
Gunner 65	0.723987456	0.3792348	0.09746	-0.07428
Gunner 11	0.730169736	0.326016239	-0.09373	-0.00118
Gunner 12	0.497063322	0.29245586	-0.12423	-0.07596
Gunner 13	1.17426754	0.542217628	-0.0175	0.108542
Gunner 14	0.793003721	0.279006195	-0.11	0.007885
Gunner 21	1.178573557	0.046938776	0.113469	0.046939
Gunner 22	0.629485731	0.310849002	-0.1974	0.0112
Gunner 23	0.863609878	0.316818353	0.122308	-0.00788
Gunner 24	0.826139312	0.281419797	-0.0414	0.0522
Gunner 31	1.050450321	0.442089473	0.0248	0.1176
Gunner 32	1.0234987	0.42349875	0.06972	0.09174
Gunner 33	0.700116856	0.297234615	-0.00327	-0.04077
Gunner 34	0.82349876	0.39187234	0.04659	-0.04239

Figure 6. Consistency and accuracy values.

time, completing all AGTS requirements was itself the task and the numbers were never used to assess crews.

In addition to fulfilling the requirements established by higher headquarters, we selected five pre-basic live-fire exercises that best evaluated the gunners.

The data

The following paragraphs discuss the results and findings of each variable.

Speed. The results of the speed variable are straightforward. An evaluator now has an objective assessment regarding TA and KT, and the ability to compare his gunners. More importantly, the evaluator can use the analysis to tailor specific training tasks to the individual gunner. I believe this concept is the most important lesson-learned from the whole process.

A company commander can use the data and analysis to develop specific training tasks that directly target soldier weaknesses. For example, TA time can depict scanning techniques. Just from the raw data, an evaluator can focus on the scanning technique of C11 and C24 and determine if it is the cause of slow TA. It gives the evaluator (or, in our case, the AGTS's instructor/operator) a focus when observing and training gunners. This data allows the IO to define and hone in on specific tasks and skillsets on which he wants to train. The next time C11 is in the gunner's seat, the evaluator can specifically look at the Soldier's scanning technique and determine if it is the cause of slow TA.

There was also an interesting trend derived from KT. Let's observe the data for C23 and C33. C23 acquires targets in 10.356 seconds and destroys the target in 10.60577 seconds after acquisition. C33 acquires targets in 7.284 (significantly faster than C23) but takes 12.63462 seconds in destroying the target.

Again, this raw data allows the evaluator to train on specific tasks. An evaluator understands that C23 is quick to destroy the target once it is identified, whereas C33 can identify the target quickly but takes a longer time destroying it. Therefore, instead of approaching the training of both gunners equally, he can focus on improving C23's TA ability (i.e., scanning technique)

while focusing on C33's ability to destroy targets once he identifies it (i.e., lasing techniques, trigger pull, etc).

The ability to assess the proficiency of gunners and tailor training tasks to specific weaknesses is a critical tool a company commander can use in developing his fighting force.

Accuracy. The data shows us the impact point of each destroyed target. A company commander and master gunner now have an assessment tool to see the exact point at which the gunner is pulling the trigger. The data shows that C21 and C23 tend to aim high on the target, whereas C31 tends to aim to the right of the target. If the key task of the gunner is to destroy the enemy, analyzing accuracy separate from speed does not give the whole picture.

By comparing speed with accuracy, several interesting trends are evident. Common sense seems to dictate that the more time it takes a gunner to kill a target, the better his accuracy. This is the case for Gunner 11, Gunner 24 and Gunner 33. Gunner 12, Gunner 14 and Gunner 23 prove the opposite, as they will sacrifice some accuracy to kill the target faster. Then there are those individuals such as Gunner 13 and Gunner 21 who take longer to kill their targets and sacrifice accuracy at the same time. From this data, an evaluator can conclude which of his gunners need more training to improve these two vital skillsets.

To give us a different method in analyzing accuracy, all gunner targets were plotted on a chart. (Note: Charts are produced by the AGTS system, but it is advisable to plot them on another program for ease of manipulation and the ability to view all engagements on a single chart.) Figure 4 shows the charts for Gunner 13 and Gunner 66. As you can see just from a glance at the chart, the accuracy of Gunner 66 is greater than Gunner 13.

Like speed, commanders can use the accuracy variable to assess their gunners and tailor training to their needs.

Consistency. Standard deviation depicts the "shot group" of each gunner. Regardless of whether the target is hit or not, the evaluator can now see the gunner's consistency. An evaluator gets a glimpse of the gunner's fundamentals: Is the gunner getting the same sight picture every time? Is trigger-pulling an issue? Experience clearly shows that a consistent and disciplined

COMPETENCY		
	Test score	Rank
Gunner 66	21	2
Gunner 65	13	9
Gunner 11	12	10
Gunner 12	20	3
Gunner 13	13	9
Gunner 14	13	9
Gunner 21	32	1
Gunner 22	14	8
Gunner 23	15	7
Gunner 24	19	4
Gunner 31	18	6
Gunner 32	7	11
Gunner 33	19	5
Gunner 34	18	6

Figure 7. Competency test scores and ranks.

	Self competency	Self leadership
Gunner 66	8	8
Gunner 65	7	7
Gunner 11	10	8
Gunner 12	9	6
Gunner 13	4	6
Gunner 14	7	7
Gunner 21	9	9
Gunner 22	9	5
Gunner 23	8	8
Gunner 24	9	10
Gunner 31	10	10
Gunner 32	5	8
Gunner 33	8	7
Gunner 34	7	7

Figure 8. Gunner competency and leadership self-assessment.

CHEMISTRY				
	Competency rate	Score	Leadership rate	Score
Gunner 66	8.6	10	7.733333	8
Gunner 65	7.46667	8	7.6	8
Gunner 11	7.952380952	8	6.047619048	6
Gunner 12	8.428571429	10	6.952380952	6
Gunner 13	5.238095238	6	5.80952381	6
Gunner 14	5.333333333	6	6.095238095	6
Gunner 21	7.380952381	8	8.333333333	10
Gunner 22	8.476190476	10	7.476190476	8
Gunner 23	8.333333333	10	7.476190476	8
Gunner 24	8.380952381	10	8.619047619	10
Gunner 31	8.333333333	10	8.095238095	10
Gunner 32	6.095238095	6	6.761904762	6
Gunner 33	7.238095238	8	5.904761905	6
Gunner 34	5.857142857	6	6.476190476	6

Figure 9. Chemistry values.

method in laying the reticle on the target is necessary for success. Analysis along with accuracy of the consistency variable gives a more effective evaluation.

The data allows us to tailor specific skillsets to gunners. Gunner 22 is a primary example. The accuracy (-.1974, .0112) is one of the weakest within the company; however, his shot consistency (.629485731, .310849) is among the best. Based on these numbers, the evaluator can specifically work on improving his accuracy, knowing that the gunner's consistency displays sound fundamentals. The consistency variable provides additional information when evaluating and training gunner proficiency.

Competency. The test served two purposes. First, it provided a self-assessment for the gunners and challenged them to become more tactically and technically competent. It was evident from the test scores (out of 50) that tactical/technical competency

was not where it needed to be. I charged SSG Fermain, the company master gunner, to develop a test based on what he thought were a gunner's core competencies. He, along with the C13 tank commander, asked for input from company leadership and developed questions based on what they felt a gunner should know. The test scores served as a motivation tool and fostered an environment of learning. Second, it provided the master gunner an insight as to what core competencies were deficient. It gave a focus to the Sabot Academy classes conducted at the company level. The master gunner could now develop the curriculum focused on weaknesses rather than strengths. Like the previous variables, the data allows leadership to tailor training to individual Soldiers.

Chemistry. Statistical analysis of chemistry proved to be the most challenging task. To implement a subjective variable into an objective assessment proved to be a difficult yet enlightening

GUNNER PROFICIENCY RANKING		
	Gunner score	Rank
Gunner 66	45	1
Gunner 33	45	1
Gunner 14	49	2
Gunner 22	55	3
Gunner 12	62	4
Gunner 23	67	5
Gunner 11	69	6
Gunner 34	62	7
Gunner 65	71	8
Gunner 21	76	9
Gunner 24	77	10
Gunner 13	86	13
Gunner 31	82	11
Gunner 32	84	12

Figure 10. Overall ranking of gunners.

study. Figure 8 gives us a glimpse into the gunner's psyche. How does he view himself? Is he confident? Is he quietly confident? Does he think too little or too much of himself? Gathering these assessments gave the leadership further insight into how the gunner viewed himself.

It is interesting to see not only how the gunner views himself but also how his subordinates and leadership assess his capabilities. Additional to the data below, the information from individual crewmembers and first-line supervisors are available for analysis.

Figure 9 is the average ratings from all participants of the survey. It is interesting to see several examples of discrepancy between a gunner's competency and leadership ability. Where certain gunners may be strong in competency, they lack leadership ability. On the other hand, there are certain gunners with high leadership rates who trail in competency. Which is more important? It would seem easy to conclude that competency is easier to train than leadership. Perhaps those gunners with high leadership ratings but low competency scores are younger gunners who possess tremendous potential. Having this data allows company leadership to better assess gunners within the fighting force.

Most important variable

Statistical analysis gives us more tools to evaluate and analyze variables. Concerning our gunner-proficiency equation, which variable is the most important? Answering this question is significant in that it allows us to prioritize our training. This can be applied in two ways:

- In a limited time, knowing the most significant variable allows a company to focus on the one variable that will most improve overall gunner performance.
- When training new gunners, understanding the most significant variable focuses the master gunner on the key task that will foundationally grow a proficient gunner.

To process this raw data and find which, if any, variables are statistically significant, I challenged SPC Mark Rothenmeyer to use a linear-regression model.⁷ Linear regression creates an equation to explain a dependent variable; in this case, the gun-

ner's ranking among the company gunners, using one or more independent variables. In this equation, the independent variables were TA time, KT, average error of azimuth, average error of evaluation, standard deviation of azimuth, standard deviation of evaluation, score on the KT and leadership ranking. The equation is derived as:

$$\text{Gunner ranking} = -17.24 + 1.28 (\text{TA}) + 0.36 (\text{KT}) + 12.13 (\text{AEA}) + 25.71 (\text{AEE}) - 0.55 (\text{SDA}) + 11.08 (\text{SDE}) + 2.58 (\text{KT}) + 0.27 (\text{LR})$$

The regression resulted in one variable being the most statistically significant: TA time. In the equation, 78 percent of the variance in the dependent variable explains this independent variable.

This regression supports the hypothesis. It found that finding the target – an unrated technical skill – was statistically significant in the overall ranking of a gunner, while the gunner's leadership rating proved to be less significant. This is not to say that a gunner's ability to lead his Soldiers is not important, but that a gunner's evaluation should be on more than just the traditional subjective criteria. It is clear from the LR model that if a company has limited time to improve the performance of all its gunners, it should focus on TA. Furthermore, the model shows that when training brand-new gunners, TA is the most significant variable.

Conclusion

The purpose of this study is to use lessons-learned from the statistical-analysis revolution in sports to better train and evaluate Soldiers. I argue that using objective assessments provides a better evaluation tool to measure the proficiency of Soldiers and information to tailor training according to their weaknesses. Furthermore, it provides a company commander and master gunner the tools necessary to best place and use Soldiers while creating an environment of competition and esprit de corps that drives and motivates Soldiers.

Not all Soldiers are equal. They have their individual strengths and weaknesses. Statistical analysis provides a definition to that statement. On which tactical or technical individual Soldier task do they need the most training? With statistical data, I can develop a gunnery-training plan with my master gunner that uniquely targets each Soldier's weakness. Specificity is the key here. The more information I have, the better I can create training plans. When a gunner now enters the AGTS, the master gunner or IO now has specific information that can enhance that training experience.

Figure 10 allows the company commander and first sergeant to better deploy and use gunners.

Company leadership can use this information to place proficient gunners in key positions. For example, with the high rankings of Gunner 33 and Gunner 22, they are now prime candidates to become a commander, executive officer, platoon leader or platoon sergeant gunner. A company commander now has an objective assessment of how his gunners compare to each other. It is not the whole story, and there are variables that are not quantified (or correctly taken into consideration), but it is more informative than what he previously had. That is the key: any information that can improve the commander's assessment of his Soldiers improves the fighting force. A company commander can now assess who his seventh or 10th best gunner is, and that information will pay dividends in future operations.

Competition and esprit de corps are key components in war fighting units. How does a leader maximize the competitive spirit within individual Soldiers while building camaraderie? Although not a priority when starting this study, the byproduct

of competition among gunners proved to be valuable for the unit. It humbled and motivated gunners to continue to develop in their profession. The desire to outperform peers created an environment that encouraged gunners to pursue excellence. The company fostered an environment that encouraged time spent on gaining knowledge and acquiring skill.

It is important for leaders to understand that a very thin line exists between healthy and toxic competition. Company leadership should implement competition in an environment that maximizes its potential.

Effective leadership is a multi-faceted challenge. Statistical analysis will not provide all the answers and may serve to be only a small fraction of the equation. However, I believe it is a tool that can directly enhance a commander's capability of successively training and deploying a killer fighting force.



CPT Michael Kim commands Company C, Task Force 1-72 Armor Regiment, at Camp Casey, Korea. He has served in various positions in the United States and Iraq, including scout and support-platoon leader, 1st Squadron, 1st Cavalry Regiment, Budingen, Germany; executive officer, Alpha and Headquarters Company, 1-35 Armor Regiment, Baumholder, Germany; and commander, Forward Support Company, Operation Iraqi Freedom 08-09. He holds a bachelor's of science degree from the U.S. Military Academy at West Point.

SPC Mark Rothenmeyer serves as an M1A2 SEP tank crew-member in Company C, Task Force 1-72 Armor Regiment, Camp Casey. He has also served as training room noncommis-

sioned officer in charge, loader and driver with Company C, 1-72 Armor Regiment, Camp Casey. He holds a bachelor's of science degree in economics from Frostburg State University.

Notes

¹ Bestsellers list July 6, 2003, *New York Times*, <http://www.nytimes.com/2003/07/06/books/best-sellers-july-6-2003.html?pagewanted=all&src=pm>.

² Grabiner, David, "The Sabermetric Manifesto," *baseball1.com*, January 2004, <http://baseball1.com/baseball-archive/sabermetrics/sabermetric-manifesto/>.

³ Ibid.

⁴ Investigation result on the sinking of the RoK ship Cheonan, RoK Ministry of National Defense, May 20, 2010, <http://www.mnd.go.kr/webmodule/htsboard/template/read/engbndread.jsp?typeID=16&boardid=88&seqno=871&c=TITLE&t=&pagenum=3&tableName=ENGBASIC&pc=undefined&dc=&wc=&lu=&vu=&iu=&du=&st=>.

⁵ Kim, Hyung-Jin, and Kim, Kwang-Tae, "Korea Attack: Yeonpyeong Island Shelled by North Korea," *Huffington Post*, Nov. 23, 2010, http://www.huffingtonpost.com/2010/11/23/korea-attack-yeonpyeong-island_n_787294.html#s189509.

⁶ Simmons, Bill, *The Book of Basketball*, New York: Ballantine Books, 2009.

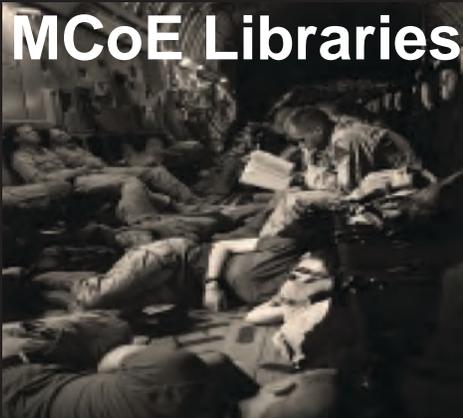
⁷ A key strength of the U.S. military is the collection of unique backgrounds and talents consolidated in one fighting force. SPC Mark Rothenmeyer was an economic major in college and decided to join the military to serve his country. I was able to use his unique ability to assist me in this study.

ACRONYM QUICK-SCAN

AEA – average error of azimuth
AEE – average error of evaluation
AGTS – Advanced Gunnery Training System
FM – field manual
HBCT – heavy brigade combat team
IO – instructor/operator
KT – kill time

LR – leadership ranking
OPNET – operator new-equipment training
RoK – Republic of Korea
SDA – standard deviation of azimuth
SDE – standard deviation of evaluation
SEP – system-enhancement package
TA – target acquisition

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Validating the R&S Squadron and the Future of Reconnaissance

by CPT Joshua T. Suthoff and CPT Zachary S. Byrnes

After the opening months of combat operations in both theaters, Afghanistan and Iraq, manned ground-reconnaissance elements struggled to find a role as insurgents went to ground. Open enemy formations no longer existed; however, land-owning units still needed surveillance assets to conduct multidimensional reconnaissance of the areas of operation and villages they were trying to clear, hold and build.

Early operations such as Anaconda and the hunt for al-Zarqawi proved that locating enemy positions required ground assets in addition to unmanned intelligence, surveillance and reconnaissance assets. Regional commands and battlespace-owning brigades need manned ISR assets to confirm intelligence, identify the next phase of the operation and determine if an area needs to be secured; unfortunately, using organic assets for these operations takes operational time and combat power, forcing the Army to relook its ground-reconnaissance assets in the war on terrorism.

The battlefield surveillance brigade, of which there are currently three active and assigned to I, V and XVIII Corps, are the Army's solution to the reconnaissance problem. Within the BfSB is the reconnaissance and surveillance squadron, consisting of a headquarters and headquarters troop, two scout troops and a traditional long-range surveillance company. The R&S squadron was, in theory (as with all Army units), designed for conducting detailed reconnaissance and developing the situation for higher headquarters (Figure 1).

Adapting task organization

According to Field Manual 3-20.96, *Reconnaissance and Cavalry Squadron*, the R&S squadron is only fully capable of conducting area reconnaissance and local security. All other tasks, both reconnaissance and stability operations, require the squadron to be reinforced by additional combat power and enablers (FM 3-20.96, Paragraph 1-4).

To enter the counterinsurgency fight – and reality – before deploying to Operation Enduring Freedom 10-11, the 1-38 R&S Squadron, 525 BfSB, Fort Bragg, N.C., adjusted its organic task organization to better fit the current fight. First, lack of organic fires proved an unacceptable risk in a theater where patrols depend on it daily. Through operational-needs statements and extensive cross-planning with other brigades, the squadron was able to train 11Bs and one 88M to fill a five-gun 60mm platoon.

Another addition to the task organization was administrative control of the brigade company support to provide forward-support logistics and maintenance services to the squadron. The squadron fire-support officer was able to certify multiple 13Fs as Joint fires observers, giving the squadron more capabilities. The deployed task organization was better, but it still lacked the combat power and support to justify owning battlespace (Figure 2).

FM 3-20.96 states that the R&S squadron can conduct all other surveillance tasks minus recon-in-force with additional assets



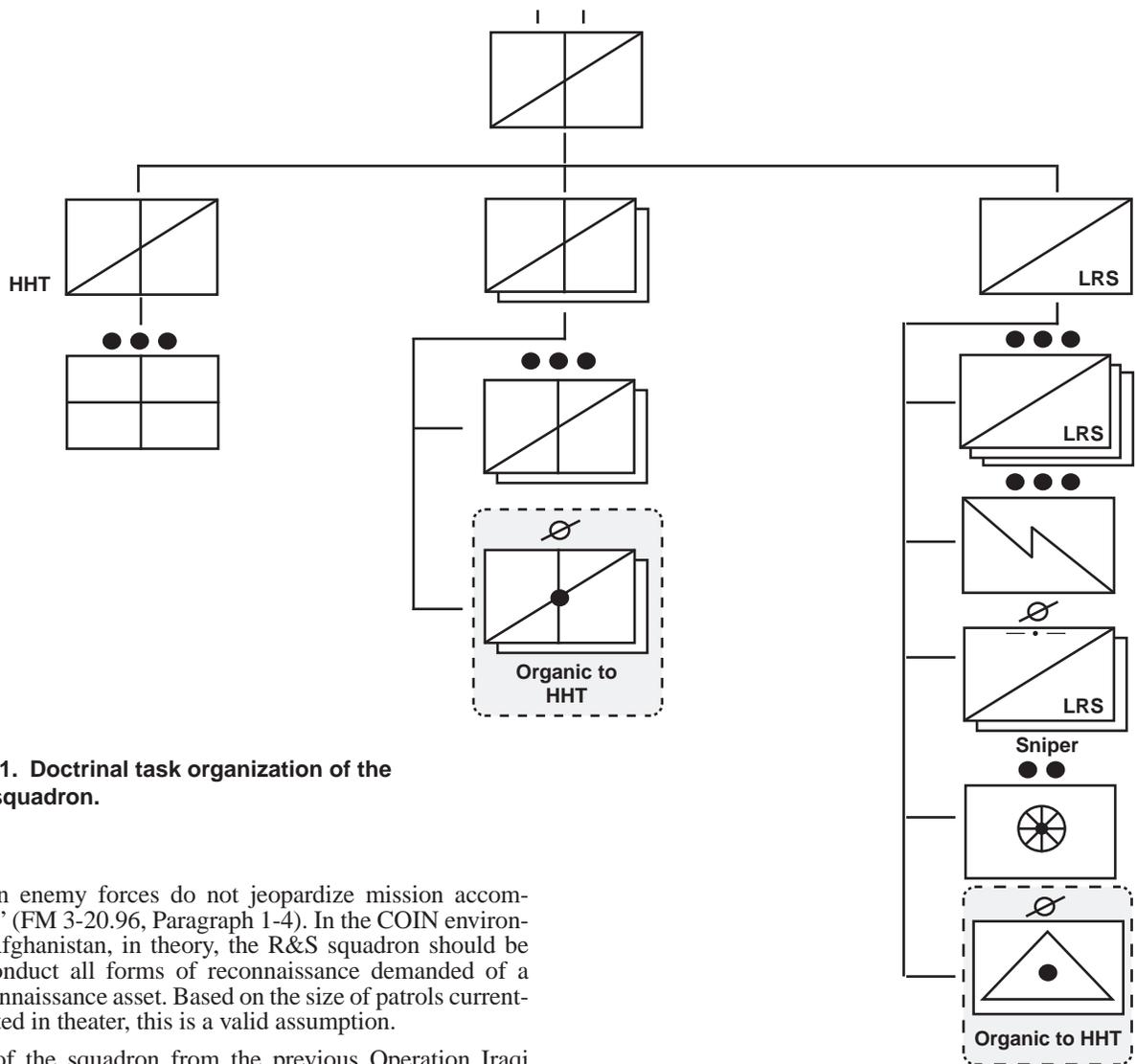


Figure 1. Doctrinal task organization of the R & S squadron.

and “when enemy forces do not jeopardize mission accomplishment” (FM 3-20.96, Paragraph 1-4). In the COIN environment of Afghanistan, in theory, the R&S squadron should be able to conduct all forms of reconnaissance demanded of a corps reconnaissance asset. Based on the size of patrols currently conducted in theater, this is a valid assumption.

Veterans of the squadron from the previous Operation Iraqi Freedom surge could see higher headquarters’ most likely course of action: a corps asset would be used as an economy-of-force in the campaign for Kandahar City and surrounding areas. These veterans knew that military planners looking to fill battlespace and gaps in forces only look at assigned military occupational specialties and not a unit’s mission-essential task list. The idea of economy-of-force and filling battlespace gaps does brief well in morning commander’s update assessments, but ground truth is usually different. An R&S squadron only has four maneuver platoons between the two scout troops to conduct combat patrols with additional taskings, like quick-reaction force and perimeter guard, that come with “real estate” in theater. The additional taskings can take an R&S squadron’s combat power from 100 percent to 75 percent or 50 percent on any day.

Round hole, square peg

As the deployment continued, the squadron assumed a battlespace about the size of Connecticut with multiple fixed combat outposts. To maintain an effective presence throughout the AO, the requirement to maintain multiple outposts and operational coordination centers forced the creation of more platoons “out of hide.” B/1-38 was able to use its mortar section to create three 15- to 19-man platoons, again changing the task organization of the squadron back to a more traditional reconnaissance, surveillance and target-acquisition modified table of organization and equipment.

Collaborating with the Afghan Border Patrol for daily patrols was necessary to give the platoons additional combat power, but

also increased cooperation and understanding between the two units. The addition of a third platoon allowed two platoons to operate along the flanks of the fixed security site, giving the 60-man troop a much bigger appearance than it actually had. Manpower adjustment was constantly necessary to ensure that platoons had enough personnel to meet guard-force requirements or upcoming mission needs.

The commander of B/1-38 (one of the authors) had to constantly relook his intelligence preparation of the battlefield and decide if a 15-Soldier patrol, kilometers away from QRF and barely within the range of medical-evacuation facilities, was necessary. The small platoons were successful because they forced every member of the platoon to stay engaged, knowing each position was critical. The troop was able to maintain a three-platoon set for the last six months of the OEF deployment.

Issues

The current use and organization of the Army’s R&S squadron is not acceptable or feasible on four points.

Point 1: mission assignment. The armor, infantry and military-intelligence branches are watching deployments of the BfSBs/ R&S squadrons to justify the units and ensure they meet mission requirements. However, any assumptions made would be

false because the currently deployed BfSBs and squadrons own battlespace. The correct action would be to assign the R&S squadron an operations box for a period time, where it answers regional intelligence requirements, and then is assigned a new ops box. During this time, tactical and civil-affairs IRs (sewage, water, electricity, academics, trash, medical, safety and other, or SWEAT-MSO, and areas, structures, capabilities, organizations, people and events, or ASCOPE) of an area can get a response and returned to that regional command.

A regional command could then assign specific units to the AO, such as a CA team with prefocused projects, based on the R&S squadron's SWEAT-MSO and ASCOPE assessments. This type of reconnaissance would serve as a better economy-of-force for neglected areas, allowing enemy and friendly local nationals to be surprised by the sudden appearance of an unknown unit in their village.

Ideally, the R&S squadron is prepositioned at a main contingency-operations base (for example, Balad, Speicher, Bagram Airfield or Kandahar Airfield), where it can quickly slice elements to regional commands preparing for offensive and/or clearing operations. With air assets in close proximity, LRS teams can fly to outlying areas to answer priority intelligence requirements and observe named areas of interest. Scout troops should remain light, relying on a few heavy expanded mobility tactical trucks to move additional equipment forward to requesting brigades. Until the squadron is used as a reconnaissance asset – i.e., moving forward to the next clearing operation or stationed on the Afghanistan/Pakistan or Syria/Iraq border – there will be no validation of the R&S squadron METL.

Point 2: task organization. The current task organization does not provide what a corps reconnaissance asset should have for reconnaissance-based tasks. The squadron can only slice LRS platoons/teams or small troops to combatant commands for a small scout addition with limited operational time. Under the

proposed task organization (Figure 3), entire troops with LRS teams can split to conduct mounted and dismounted reconnaissance over multiple NAIs.

The troops could internally provide QRF, infiltration/exfiltration and interdiction teams to the overall LRS capability. These sliced elements could screen, feint or determine the forward edge of insurgent operations. In addition to kinetic operations, sliced elements or the entire squadron could be sent to areas where intelligence is lacking and conduct a zone reconnaissance to determine if additional forces are necessary. The addition of organic fires is critical for any unit operating outside of supporting-fires range.

Under the proposed organization, each LRS platoon has an insertion specialty that would allow it to focus its dwell time on maintaining certification and perfecting its insertion technique. With three active R&S squadrons in the Army today and additional National Guard elements, the squadrons could rotate through theater every 18-24 months. Troops can split for contingency operations around the globe. Longer dwell periods would allow LRS elements to ensure all teams are proficient prior to deployment. LRS elements could also stay certified longer if Army personnel management closely monitored the permanent-change-of-station of highly qualified and trained noncommissioned officers. Allowing the unit to select its members would also increase its proficiency and reduce the squadron's time training Skill Level 1 tasks.

Point 3: risk aversion and equipment needed vs. equipment supplied. The war on terrorism has seen the continual progression and literal growth of the Army's combat vehicles. M1025 humvees changed to M1114s and M1151s as additional armor was added in the name of saving lives, but the protection came at the expense of situational awareness. Maxx-Pros and mine-resistant all-terrain vehicles are the pinnacle of crew protection against mines and improvised explosive devices, and the abso-

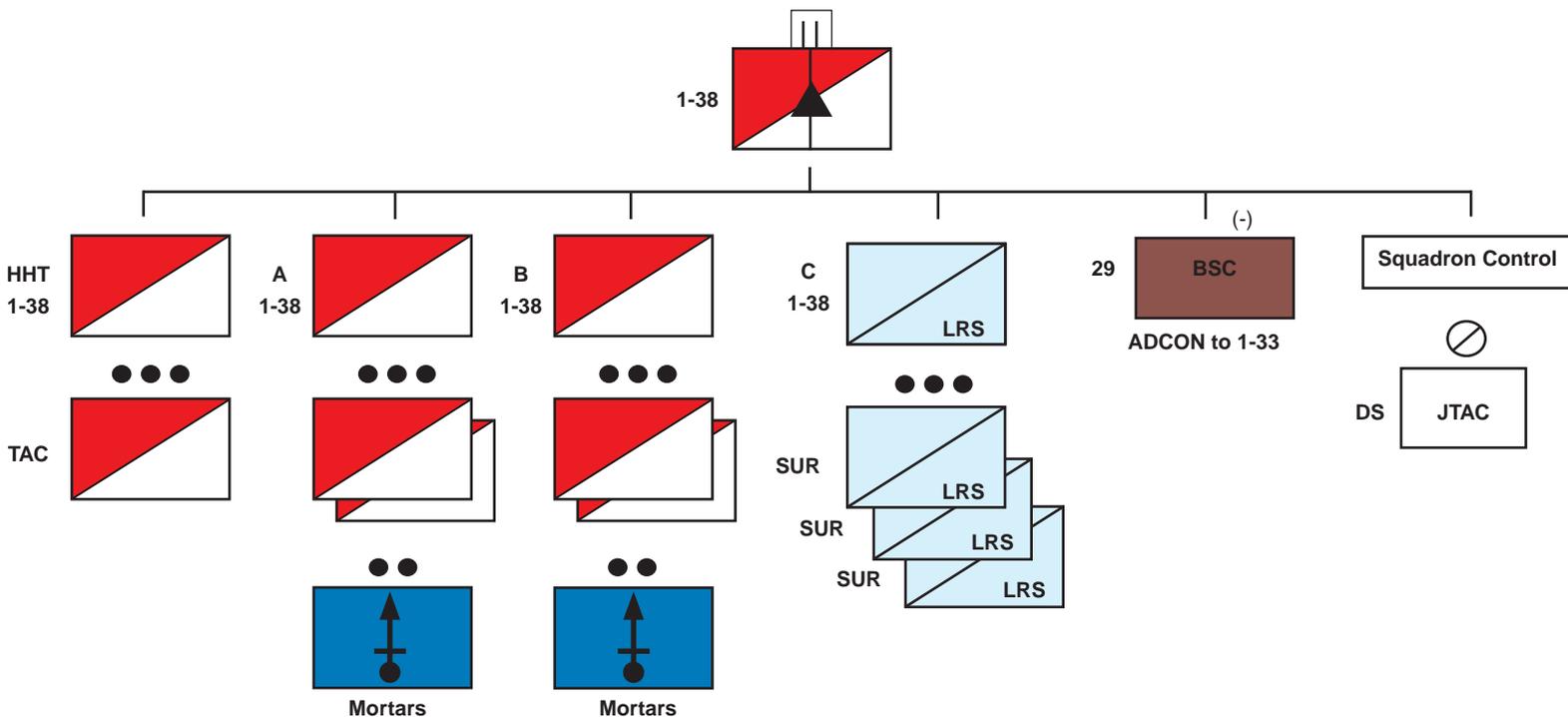


Figure 2. Deployed task organization.

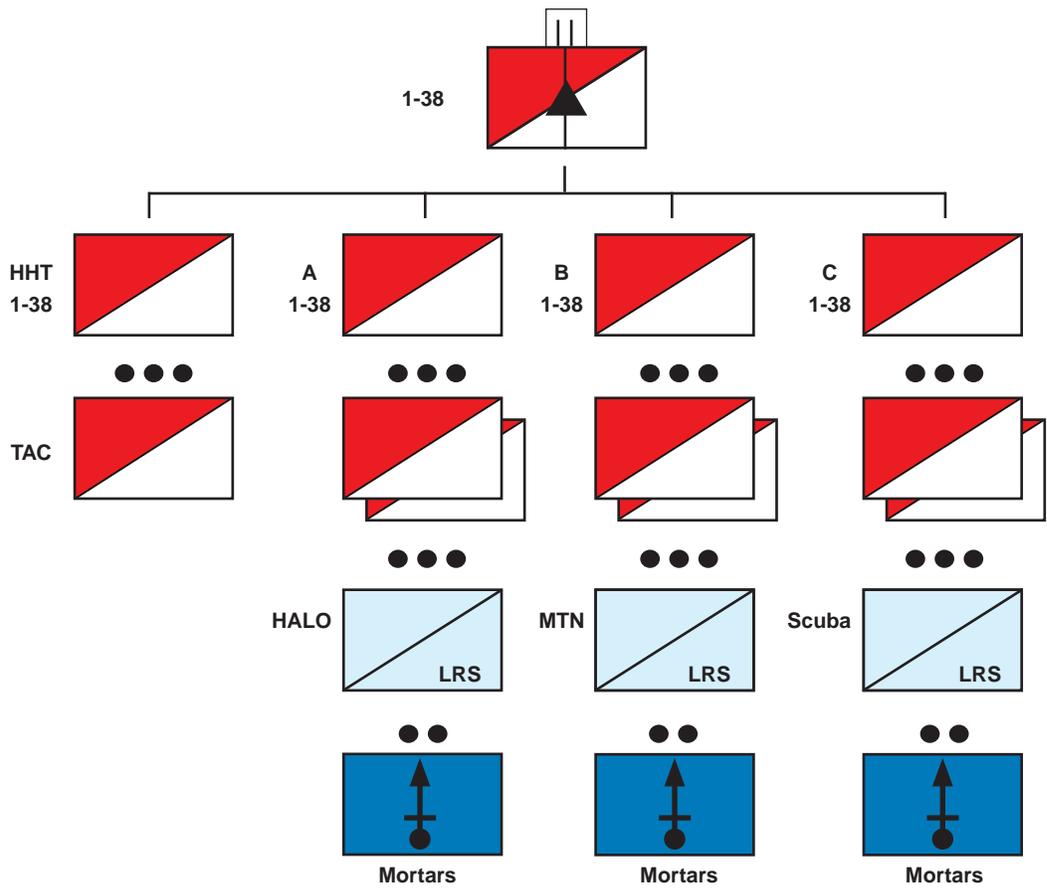


Figure 3. Proposed task organization.

lute worst reconnaissance vehicles on the battlefield. These vehicles on a kinetic battlefield are the first to draw main gunfire.

During the deployment, the squadron was equipped with MATVs that were too heavy to conduct reconnaissance in certain types of terrain where lighter vehicles could operate. The MATV platform has decent gas mileage but still requires more JP8 fuel, which complicates logistics resupply for extended reconnaissance missions. The squadron faced a reconnaissance mission where the weight and gas mileage of an MATV acted as a constraint to mission accomplishment.

Since the loudness and size of a MATV acts as a daily constraint for stealthy movement across the battlefield, the squadron must have lighter armored vehicles or all-terrain vehicles with the mandate to operate them. Getting mission-appropriate vehicles through supply channels is just half the battle, however; getting approval to operate less-armored vehicles in today's risk-adverse Army would be an achievement in its own right. What is harder to attack: a large vehicle restricted to roads or a lighter vehicle moving freely about the terrain? Lighter "soft skin" vehicles or all-terrain vehicles are not always the answer, but – like any vehicle or piece of equipment – simply a means to accomplish the mission.

Since the squadron was a battlespace owner, it had no priority over other units for lift support. Lack of priority for lift support further hinders reconnaissance troops and especially the LRS company's ability to plan and conduct operations. Lift support is scarce and unreliable, and last-minute changes or loss of lift support disrupts operational cycles. Even the support from one

team of UH-60 Blackhawks or CH-47 Chinooks would greatly increase the reconnaissance ability of LRS or scout teams.

The LRS teams are currently on paid airborne status, with some teams being high-altitude, low-opening qualified and certified. LRS and Special Forces teams perfected HALO insertions during Vietnam. However, LRS does not fall under a Joint Special Operations Command, so any form of airborne operation would be out of the question and considered ludicrous. If LRS is to retain airborne status, then airborne operations need to remain a viable and supportable option. What is the least obvious insertion to the enemy: a pair of UH-60s landing in a landing zone, four military vehicles stopping in an area for a while or a night tailgate jump from a CH-47 passing through the airspace? Again, airborne operations are not always the answer but a means to accomplish the mission.

The common thread through equipment issues, lift support and airborne operations is today's risk aversion/risk mitigation obsession. Doctrine designs LRS and scouts to operate in small teams ahead of the main body. An NAI that took two LRS Soldiers in Vietnam to reconnoiter now takes a team of six to eight. Doctrine also significantly reduces the distance from an observation post to its QRF in the name of safety and deniability in the event of casualties. The authors do not suggest taking unnecessary risk, but surveillance is an art that enemies must buy into to be effective, and it is, by nature, more dangerous than regular combat operations.

Point 4: change to METL. What is the future of reconnaissance? It is somewhere between unmanned sensors and lying in a hide site. The 1/38 Squadron had great success by using un-

manned ground sensors and other intelligence platforms to find, fix and finish Taliban attempting to move through the AO. These methods were not traditional reconnaissance or battlespace missions but were adapted by on-ground commanders.

Unfortunately, training on these types of missions in garrison would be extremely difficult based on resources and equipment. In addition, scout/LRS Soldiers who operate forward of battle or in isolated areas need to be JFO-certified to stay relevant.

In conclusion, battlespace-owning brigades involved in COIN operations cannot commit organic combat forces to answer PIRs and watch NAIs. The R&S squadron with the current deployed task organization or the one proposed by the authors could answer these IRs and help decide the next phase in the operation. Developing the situation for the higher commander will allow him to decide how and when he will employ his forces.

Planners will continue to debate the value of ground-reconnaissance assets and misuse them. Currently R&S squadrons cannot answer the METL question until sent forward to confirm with the proper equipment and support.



CPT Josh Suthoff commands B Troop, 1-38 Cavalry, 525 BfSB, at Fort Bragg, NC. He previously served as plans officer, 1-38 Cavalry, 525 BfSB; assistant S-3, 1-33 Cavalry, 3rd Brigade Combat Team, 101st Airborne, Fort Campbell, KY; executive officer, B Troop, 1-33 Cavalry, 3rd BCT, 101st Airborne; and platoon leader, B Troop, 3rd BCT, 101st Airborne. His military schooling includes Ranger School, Scout Leader Course, Engineer Captain's Career Course, Air Assault and Airborne schools. CPT Suthoff holds a bachelor's of arts degree in psychology from the University of Missouri in Columbia, MO, and a master's of science degree in geological engineering from Missouri University of Science and Technology.

CPT Zach Byrnes is the executive officer of B Troop, 1-38 Cavalry, 525 BfSB, Fort Bragg, NC. He previously served as platoon

leader of B Troop, 1-38 Cavalry, 525 BfSB. A graduate of the Reserve Officer's Training Program at Gonzaga University in Spokane, WA, in 2008, his military schooling includes the Armor Basic Officer Leadership Course and Army Reconnaissance Course at Fort Knox, KY, as well as Airborne School at Fort Benning, GA, in 2009.

ACRONYM QUICK-SCAN

ADCON – administrative control
AO – area of operation
ASCOPE – areas, structures, capabilities, organizations, people and events
BCS – brigade company support
BCT – brigade combat team
BfSB – battlefield surveillance brigade
CA – civil affairs
COIN – counterinsurgency
FM – field manual
HALO – high altitude, low opening
HHT – headquarters and headquarters troop
IR – intelligence requirement
ISR – intelligence, surveillance and reconnaissance
JFO – joint fire observer
LRS – long-range surveillance
MATV – mine-resistant all-terrain vehicle
METL – mission-essential task list
MTOE – modified table of organization and equipment
NAI – named area of interest
PIR – priority intelligence requirement
QFR – quick-reaction force
R&S – reconnaissance and surveillance
SWEAT-MSO – sewage, water, electricity, academics, trash, medical, safety and other

Concepts of operation and highlights of changes to R&S squadron MTOE:

- All 19D/11B team leaders and up are Ranger-qualified;
- The squadron is allowed to recruit 19/11s directly from post in-processing (three-day selection process);
- 19Ds are trained as JFOs;
- The unit is on jump status;
- Schools available: HALO, scuba, mountain, survival, sapper, Ranger, Pathfinder, Jumpmaster;
- The unit has an MTOE mortar platoon;
- Each LRS platoon has insertion/operating specialty;
- The LRS platoon leader slot remains a junior captain;
- The HHT and S-3 has three majors (executive officer, future-operations officer and current-operations officer) and two captains (insertion/extraction officer and plans officer);
- The squadron (internal QRF) is able to observe six NAIs at any time, with scout platoons acting as QRF/interdiction;
- The squadron (external QRF) is able to observe 15 NAIs;
- The squadron can conduct route, area and zone reconnaissance;
- Troops can be cut to different regional commands;
- With the three current R&S squadrons active, squadrons could rotate through theater on a one-year to six-month basis;
- Ideally, the squadron's headquarters is the same location (for example, Kandahar Airfield) for each deployment and then attached as needed;
- The command using the squadron provides maintenance and logistics support;
- Potentially, three regional commands could have dedicated reconnaissance assets for conventional or COIN fight.

Excalibur Employment in Afghanistan: Army and Marine Corps Differences

by retired MG Toney Stricklin

(Editor's note: In this article, retired MG Stricklin, former commander of the Field Artillery Center and Fort Sill, makes a case to maneuver commanders for more use of the M-982 Excalibur. In the article immediately following this one, COL Gene Meredith and other writers assigned to Fort Sill's Fires Center of Excellence give a more cautionary view of Excalibur. Both articles are presented here for consideration.)

Our country has engaged in a long and costly war for the last decade. During this time, the enemy affected many of the U.S. military forces' operational changes. These changes enable our forces to adapt to an enemy grounded in a 12th-Century tribal culture and capable of executing a 21st-Century insurgency.

The U.S. Army and Marine Corps continue to spearhead our nation's efforts on the ground. While taking the fight to our enemies in forbidding terrain and circumstances, the Army is also going through significant organizational and training adaptations. The changes mean to prepare us for the war we fight today as well as future wars.

Unfortunately, these Army-level, top-down, directed changes have unintended consequences. For instance, these changes affect the Field Artillery Branch's ability to defeat adversaries in future wars. Some of the problems include fire-support coordination and organizational changes made over the past decade to Army field-artillery units, which have had unintentional consequences on the employment of precision munitions such as the M-982 Excalibur in theater. The USMC, which of course is not subject to the Army's organizational changes, employs the M-982 in Afghanistan at a significantly higher rate than the Army does. This is worth further examination by Army maneuver commanders.

For example, over the six-month period of October 2010 to April 2011, Army maneuver commanders employed the M-982 11 times in Afghanistan. Over the same period, USMC commanders fired the M-982 149 times. (Rates have also remained consistent over recent months.) The discrepancy in using the M-982 is an interesting statistic given that the weapon is equally available to both services.

Since USMC commanders herald the M-982's effectiveness – in fact, indicating that the M-982's success exceeds their expectations – this article addresses several things:

- One aspect of the changes affecting the Army in Afghanistan, contrasting it with how USMC field-artillery units are thriving in the same environment; and
- The difference in how the Army and Marine Corps employ the M-982.

In researching this article, I focused on all aspects of why the Army does not employ the M-982 at the same rate as the USMC.

Employing Excalibur

Typically, engagement of al-Qaeda and Taliban forces in Afghanistan occurs in areas and locations where potential for col-

lateral damage is certain. The M-982 gives maneuver commanders the organic capability to deliver the precision necessary to avoid civilian casualties and minimize collateral damage.

GEN David Petraeus pointed out the importance of precision when he released his guidance Aug. 3, 2010, for conducting counterinsurgency operations in Afghanistan. "We can't win without fighting, but we also cannot kill or capture our way to victory," he said. "Moreover, if we kill civilians or damage their property in the course of our operations, we will create more enemies than our operations eliminate, which is exactly what the Taliban wants; do not fall into their trap. We must continue our efforts to reduce civilian casualties to an absolute minimum."

The Marine Corps embraced the M-982's accuracy, lethality and ability to minimize collateral damage. Some of Excalibur's advantages:

- The M-982 reduces the logistics tail, which in the past required mountains of "dumb-iron" munitions.
- The M-982 performs well against targets where collateral damage must be minimal and the target is accurately located. In scenarios with "troops in contact" and situations where friendly forces are within 100 meters of the target, the M-982 limits collateral damage.
- With the M-982, "danger-close" is a technique that may be no longer necessary. Army reports indicate that units are surprised and disappointed when the M-982 does not destroy the target building. The engineering of other munitions destroys structures and kills its inhabitants. In the M-982, the engineering provides a precision kill without destroying the structure or infrastructure surrounding the target.

4 differences

Loss of Army's fire-support coordinators. After much research, I believe that the single greatest impediment for why Army maneuver units do not employ the M-982 consistently is the loss of fire-support officer functionality at brigade combat team and division levels. This is evident in the loss of the Army's senior fire-support coordinators in BCT and division headquarters, and the elimination of the division's fire-support element. Although organic FSOs remain assigned to the BCT and division, their experience, training and access to senior maneuver commanders is not as effective as were senior FSCOORDs. In today's organizations, FSOs may not function as the full-time fire FSO on a day-to-day basis.

The changes of the Army modular force structure eliminated the brigade fire-support element from the direct-support artillery battalion and made it organic to the BCT. The Army's decision to inactivate its division and corps artilleries eliminated the FSCOORD for divisions and corps that make up many joint-task-force organizations. Those colonels (formerly division-ar-

tillery commanders) and brigadier generals (formerly corps-artillery commanders) who served as the senior FSCOORDs had the training, experience, confidence and access to the senior maneuver and JTF commanders that our current field-artillery commanders do not.

The senior FSCOORDs' credibility had a profound impact on brigade, battalion and company commanders' ability to employ and deliver indirect fires for their units. Simply stated, the lack of senior FSCOORDs inhibits the tactical and operational understanding that U.S. Army maneuver commanders need to employ the M-982 and other precision munitions at the appropriate time and circumstance. This is not an indictment of the U.S. Army or our field-artillery commanders. Instead, it points to a significant gap regarding support relationships between senior commanders and multiple organizations.

As the U.S. Army made its modularity decisions a few years ago, I confirmed that it was the intent of senior Army leaders to later review the sweeping organizational changes made and address any unintentional repercussions. Changes in FSCOORD structure created significant ramifications across the Army and the BCT. Review of all my evidence suggests that today's maneuver commanders and the FSOs serving in BCT and higher headquarters have significantly less functionality and expertise today than in similar organizations 10 years ago.

Lack of organic assets. Fire support is not the only inhibiting factor affecting M-982 employment. To use a combat capability effectively and consistently, it must be readily available to the maneuver commander regardless of weather, time of day or availability of other assets. Another reason why Army units do not use the M-982 more is that infantry BCT commanders do not have an organic weapon capable of firing the LW155mm howitzers in their modified table of organization and equipment. Many IBCTs, however, have task-organized in Afghanistan and include an LW155mm howitzer battery. Research indicates that the Army lacks instruction on the delivery of the M-982 in the IBCT during pre-deployment training cycles at the Joint Readiness Training Center, Fort Polk, LA.

By contrast, the USMC uses a system that provides full M-982 delivery capability. The LW155mm howitzer is their direct-support cannon system.

With the Non-Line-of-Sight-Launch System terminated by the Army and no LW155mm howitzers to fire the M-982 in the IBCT, the Army, in its IBCT, has no organic means to employ precision munitions. We have instead relied heavily on close-air support to deliver precision munitions. Composite field-artillery battalions may be the only near-term solution for the Army now. Field-artillery precision munitions should complement tactical air and attack helicopters and provide the maneuver commander scalable engagement options for a variety of targets. This also gives the maneuver commander a 100-percent organic capability, day or night, good or bad weather, 24/7 to deliver precision attacks at the designated time and place of his choosing regardless of support availability.

Lack of responsive airspace command and control. Another significant factor affecting M-982 employment in Afghanistan is airspace command and control. Some may argue this is the most significant factor. The Marine Direct Air Support Center is responsible for coordinating direct-air-support missions, along with the Fire Support Coordination Center. As a result, the USMC's FSCOORD measures associated with artillery and air support are much less complex than what the Army has to deal with.

Marine Corps M-982 missions sometimes clear at the battalion/regimental combat team. In opposition, the Army elevates clear-

ances to the Air Support Operations Center/Coalition Air Operations Center or International Joint Command in Afghanistan. For Army troops in connection with this coordination, procedure is clearly non-responsive to the maneuver commander's needs. However, the position of units also affects why USMC commanders are likely to employ the M-982 against al-Qaeda and the Taliban. In the north, the Army must contend with many more command layers than the Marine Corps does, including the North Atlantic Treaty Organization. In the east, Army units have CAS only 10 minutes away, which creates an overreliance on that asset. (There is no guarantee our nation's next fight will readily have CAS only 10 minutes away.) Organic delivery means must be available for Army/JTF commanders.

Too expensive? Finally, in a discussion about why Army units are hesitant or unwilling to employ the M-982, I was surprised to hear a young former FSO say the M-982 is so expensive that he was hesitant to use it. This is an example of a training issue with an easy resolution. Young officers and noncommissioned officers need to understand that once the institutional Army procures a munition for employment in combat, its cost is not a factor in the "how best to kill the enemy or save U.S. lives" decision process.

The M-982 does not cost \$100,000 per round. The cost of the M-982 1A is now \$80,000 and 1B is \$40,000 – it is cheaper than the Army would like, but procuring it in quantities that will reduce individual unit cost is still difficult. Do our officers and NCOs think about the lifecycle costs of employing precision munitions from the U.S. Air Force, Marine Corps or Navy tactical bombers who support them? I do not think that enters the tactical or operational calculus of whether or not to employ air-delivered precision munitions. So why should it be a factor in employing the M-982?

USMC experiences with Excalibur

The comments Marines made extolling the M-982's accuracy, speed and lethality to defeat al-Qaeda and the Taliban forces were impressive:

"Always on target."

"Two [Joint Direct Attack Munitions] missed the target; called in Excalibur and had a 'shack.'"

"Accurate to a gnat's a__."

"At the end of the day, my [commanding officer] always asks, 'What's the status of my Excalibur inventory?'"

"I fired at max range with a cold tube and still had a 10-meter hit."

"I had eight bad guys in a building. Excalibur went through the roof and got them all."

"It has given new life to the field artillery. No collateral damage."

Perhaps the most telling story came from election day in Afghanistan: the Taliban attacked two forward-operating bases simultaneously. "We called in Excalibur on one of the targets, at about 100 meters from us, and had a direct hit. Because of the accuracy, not only did the Taliban retreat from our FOB, but also from the other one as well."

And, finally, "We had eyes on our high-value target with Scan Eagle but couldn't get him, even with a gunship. He went into a small courtyard and we hit him with an Excalibur, with no collateral damage to the surrounding buildings."

The last and most important comment made by a Marine was, "Excalibur saves Marines' lives."



5 changes needed

The M-982 is a very accurate and effective munition, and there are some steps the Army should immediately undertake to make it more responsive to maneuver commanders. First is to repair the functionality loss of fire-support coordination in the Army. We need senior field-artillery officers as FSCOORDs responsible for advising, training and mentoring maneuver commanders on the employment of fires.

Secondly, the Army must develop a less cumbersome and more responsive airspace coordination process. When the process cannot support troops in contact, it is ineffective and must be fixed.

Thirdly, IBCTs must have an organic weapon to employ precision munitions. Equipping changes must make the LW155mm howitzer organic to the IBCT.

Finally, as units prepare to deploy to Afghanistan, it is essential that they train as they fight by firing the M-982. The National

Training Center at Fort Irwin, CA, is capable of this, but the JRTC does not allow the IBCT to fire the M-982 during training.

These are five modest changes that if incorporated will enhance our BCT's effectiveness and save lives today and in the future.

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Retired MG Toney Stricklin served 32 years as a commissioned officer and commanded the U.S. Army Field Artillery Center and Fort Sill, OK, from July 1999 to August 2001. He is chairman of the consulting firm TDRS LLC. Appointed by former Secretary of the Army Pete Geren as civilian aide to the Secretary of the Army, Oklahoma (West), 2008-2010, he was subsequently appointed by Oklahoma Governor Mary Fallin to the Oklahoma State Regents for Higher Education in 2011.

ACRONYM QUICK-SCAN

BCT – brigade combat team
CAS – close-air support
FOB – forward-operating base
FSCOORD – fire-support coordinator
FSO – fire-support officer

IBCT – infantry brigade combat team
JRTC – Joint Readiness Training Center
JTF – joint task force
NCO – noncommissioned officer
USMC – United States Marine Corps

A Current Assessment of Excalibur Employment in Afghanistan

by COL Gene Meredith,
with MAJ David Moser, CPT Andrew Zikowitz
and Daniel Hallagin

(Editor's note: In the previous article, retired MG Stricklin, former commander of the Field Artillery Center and Fort Sill, makes a case to maneuver commanders for more use of the M-982 Excalibur. In this article, COL Gene Meredith and other writers assigned to Fort Sill's Fires Center of Excellence give a more cautionary view of Excalibur. Both articles are presented here for consideration.)

In November 2011, I had the opportunity to lead a four-man assessment team from the Fires Center of Excellence, Fort Sill, OK, exploring the operational employment of the 155mm Excalibur and other precision munitions in Afghanistan. One of our objectives was to determine why U.S. Army forces were employing a limited number of Excalibur projectiles in Afghanistan. As we conducted our survey, we quickly realized there were multiple reasons for the limited number of Excalibur projectiles being fired, and this was a symptom of a much larger issue with indirect fires as a whole.

We organized these reasons into seven focus areas:

- Combined joint task force/regional command fire-support element capability;
- Combined-arms Excalibur live-fire training;
- Fire-support team collective training;
- Employment, institutional and field-artillery schools training;
- Close-air support employment;
- Firing-unit capabilities; and
- Airspace management.

Although Excalibur usage can and should be increased due to its accuracy, we also recognize this munition, like all others, has its strengths and weaknesses. Excalibur is neither the field artillery's nor the maneuver commander's precision-weapon panacea; rather, it is one of a select group of precision or near-precision munitions available. Therefore, the focus areas we identified are not necessarily exclusively specific to Excalibur employment but can be applied to most IDF.

Field-artillery organization for combat. To discuss the current Excalibur employment, it is necessary to understand how Army field artillery is employed and organized for combat in Afghanistan. Most deployed firing units are organized in the same way: they employ two gun platoons of M-777A2s, M-198s or M-119s. RC-East consists of eight brigades, of which five resemble standard U.S. Army brigade combat teams, and of these five BCTs, only four have deployed their organic fires battalions. RC-South consists of five brigades, of which three resemble standard U.S. Army BCTs. RC-South has only one fires battalion that provides IDF for the entire RC. Due to the size of the battlespace in both RC-East and RC-South, there are not enough fires battalions to ensure field-artillery coverage for all maneuver forces, much less coverage by a weapon system that can deliver Excalibur.

CJTF/RC FSE capability. One of the most detrimental aspects to surface-to-surface IDF employment and FSE capability has been the loss of the division artillery and/or the lack of a deployed force field-artillery headquarters. There is no colonel-level command authority at the CJTF/division level to enforce standardization and certification, or to share IDF tactics, techniques and procedures, much less advocate for Excalibur or other sur-

face-to-surface IDF. Although the division increased the FSE's personnel authorized strength to offset the loss of DIVARTY, it was not enough to allow them to perform the same functions as the 150-person DIVARTY staff or FFA headquarters. Couple this with some of the division FSE personnel shortages, and it is easy to see why there has been a degradation of surface-to-surface IDF employment, as a whole, with the second-order effect of limited precision-munitions employment. Without a deployed FFA HQ, fires battalions assigned to BCTs are forced to accept more responsibilities that would otherwise be considered the FFA HQ's duties. The lack of FFA HQ and diminished capability of the division/CJTF FSEs places the onus of Excalibur employment on fires battalion commanders and junior fire-support personnel.

To better influence the IDF fight, a fires brigade, at a minimum, should deploy with each division headquarters to provide FFA functions and fires experience and expertise for the CJTF. If that is not possible, a post brigade commander with a staff designed to execute FFA functions should deploy with the CJTF. CJTF/division fire-support coordinators and FSEs should be manned at authorized modified table of organization and equipment levels with the commensurate level of expertise required to perform their mission.

Combined-arms Excalibur live-fire training. Combined-arms Excalibur live-fire training at home station and/or at the Army's combat-training centers is inadequate for units preparing to deploy. In many cases, Excalibur capabilities are misunderstood by maneuver commanders and FISTs alike. The first time many units live-fire an Excalibur round is in Afghanistan. This is primarily due to the fact they cannot fire Excalibur at home station and/or during their pre-deployment training at the Joint Readiness Training Center, Fort Polk, LA. Units with pre-deployment training opportunities at the National Training Center, Fort Irwin, CA, do not fare much better since they are limited to only one live-fire round (if it functions properly).

Also, CTC training is often focused on the target packet and concept-of-the-operations process, opposed to the conditions they will face in Afghanistan. CTC Excalibur training does not offer experience in solving problem sets that deployed units encounter such as airspace coordination, tactical employment, collateral damage estimate concerns, ballistic-impact-point consideration, target location and the mensuration of 10-digit grids. Due to this limited exposure and incomplete training, units do not understand Excalibur employment TTPs.

In addition to this situation at the CTCs, when units deploy to Afghanistan, Excalibur live-fire training isn't conducted frequently. Not unlike missions fired at the CTCs, rounds fired downrange seem to degrade some maneuver commanders and fire supporter's opinions of Excalibur, rather than gain their confidence. In the relatively small sampling of training rounds fired in Afghanistan, any resulting "fail-to-function" or "precise miss" skews the perception of the munition's actual dependability.

To facilitate better understanding among fire-support personnel and maneuver commanders alike, the Excalibur round must be fired during home-station live-fire training. The Excalibur proj-

ect manager needs to support this requirement by immediately implementing a technical solution to reduce the size of the surface danger zone. CTC Excalibur training should be scenario-driven, to include procedures and battle drills required to accurately locate the target, clear airspace, and synchronize and cross-talk among fire-support officers and fire-direction centers to produce a BIP plan integrated with pre-planned airspace coordination measures. Units should shoot Excalibur early and often during their rotation, demonstrating to maneuver commanders Excalibur's effectiveness as well as training the entire FIST.

FIST collective training/employment. Collective FIST training is currently inadequate to support more frequent use of Excalibur. As a consequence of modularity, many FIST teams do not conduct pre-deployment training with the fires units they will serve with in Afghanistan. FISTs further decrease their ability to employ surface-to-surface IDF by training for nonstandard missions at the expense of their core competencies. (We acknowledge that this is not a new concern, and the impact is even more apparent when trying to employ a complex munition such as Excalibur.) Precision capability was further degraded when units did not train using the required digital equipment accurately employing precision munitions. Also, FISTs do not often carry the required equipment to obtain the 10-digit grid required for precision fires because they are carrying the additional equipment necessary and required by their patrolling units.

Commanders are increasingly relying on intelligence, surveillance and reconnaissance assets to provide observation for fires. Assets that provide real-time or near-real-time feeds to the tactical-operations center are preferred over dismounted observers due to their ability to aid in CDE decisions. Providing target grids, which can be mensurated with Precision Strike Suite for Special Operations Forces, with ISR assets designed for force protection is an effective practice. However, it removes the ground-based observer from the situation and further erodes the maneuver commander's confidence in the observer to do his job.

Continuing support for the current force-design update, which aligns FIST training and oversight with the fires battalion commander, will correct a great deal of the noted training inadequacies. The FCoE needs to promote the importance of the fire-supporter's priorities through continued discussion with the Maneuver Center of Excellence. The FCoE needs to refocus field-artillery junior-officer development on fire-support tasks to produce surface-to-surface fires experts. Most importantly, FIST personnel at all levels need to be proponents for fire-support expertise by training and certifying their subordinates in their primary mission of the employment of all IDF.

Institutional training. Many of the senior leaders in Afghanistan are concerned that junior officers and senior fire-support noncommissioned officers don't graduate from the Army's Field Artillery School at Fort Sill, OK., with a thorough understanding of Excalibur TTPs. They are also concerned that these Soldiers and officers have no experience on digital systems required for precision fires. As a result, units deliver pre-deployment Excalibur training to fires-battalion key leadership and generally fail to include maneuver leaders and fire supporters. The result is a failure to adequately educate commanders on the training requirements for enabling and sustaining the capability to exploit Excalibur's precision.

We recognize recent updates to 13F (forward observer) Senior Leader Course, Artillery Basic Officer Leadership Course and Field Artillery Captain's Career Course, which are significant and appropriate, but graduates of these new programs of instruction have yet to reach the deploying force. To improve precision-munitions understanding, field-artillery officers need access to material previously taught by the Excalibur new-equipment fielding team. Also, junior field-artillery officers need exposure to

material – such as airspace coordination, CDEs and technical PSS-SOF instruction – currently taught in 13F Senior Leaders Course and Targeting Warrant Officer School. Some required updates can be incorporated into the existing POI. For example, in-depth BIP management can be added to the gunnery portion of training in BOLC and FACCC.

We consider the introduction of Precision-Guided Kit as an opportunity to hone the precision skills of artillery leaders. Acquiring 10-digit grid and training target mensuration should be included in the PGK training plan. Training should be carefully developed to focus on precision-fires planning and coordination, and on considerations for tactical employment – not just delivery-system requirements. FSOs need to know how to doctrinally incorporate Accelerated Precision Mortar Initiative, Excalibur and eventually PGK into echeloning precision and near-precision fires coverage.

Combined-arms support employment. It is important to realize the influence that unmatched levels of air support and aerial ISR in this conflict have had on the combined-arms fight. Due to the lack of an air-interdiction mission or counter-air mission, air support is available to maneuver units in Afghanistan at greater levels than during any other conflict in recent history. These large numbers of CAS missions and air weapons teams have been a great asset on the battlefield; however, it has now created an over-reliance and demand for CAS and AWT that will most likely not be fulfilled in future conflicts. Air assets are favored for perceived ease and speed. Guidance and restrictions (such as rules of engagements and tactical directives) in theater favor the use of CAS and AWT as "direct fire systems" over indirect assets. Because a pilot can easily establish visual contact with a target, and the joint fires observer can easily guide the pilot to a target from an eight-digit grid, JFOs perceive air support as more responsive and don't use precision if systems.

Fire supporters must ensure their maneuver counterparts understand the impact of relying on CAS and AWT. The capability to deliver surface-to-surface fires is their only 24-hour-a-day, all-weather IDF source. Fire supporters must be advocates for all IDFs and familiarize maneuver commanders with the capabilities and limitations of these systems. They must be advocates for surface-to-surface fires in much the same way as the air-liaison officer is for CAS.

Firing-unit capabilities. Currently, M-777A2 firing locations do not cover all maneuver areas of operation in Afghanistan, thus limiting Excalibur employment. Due to the wide dispersion of firing locations, autonomous platoon operations and force cap limitations, fires battalions theater-wide do not have overlapping, mutually supporting fires, cannot mass fires nor provide precision fires throughout the entire AO. Presently, RC-East artillery employs M-777A2s, M-198s and M-119s, while RC-South employs only M-777A2s. RC-East has more IDF capability available, but both AOs have considerable field-artillery coverage gaps. All fires battalions responsible for M-777A2 and Excalibur coverage have multiple missions, some supporting more than one brigade AO, adding complexity to employing IDF. Several deployed field-artillery units' MTO&E howitzers are the M-119A2; however, in some cases they operate M-777A2 during deployment with very limited pre-deployment training. The limited 155mm coverage, difficulties with cross-brigade IDF and lack of institutional understanding of a digitized howitzer exacerbates limitations of Excalibur employment.

The pending composite M-777A2/M-119 FDU, when implemented, will have a positive impact on the capability to deliver precision IDF in theater. However, this will take time to realize, and there are solutions that can be implemented immediately. Deployed units should employ all operational M-777A2s in Afghanistan and replace all existing M-198s with M-777A2s, ex-

panding available Excalibur delivery. Lethality and accuracy can be improved by using M-777A2s for all forward-operating base-oriented IDF operations while maintaining M-119A2s for missions requiring mobility. To ensure a common understanding of the capabilities and limitations of the M-777A2 and Excalibur munition, fires battalion commanders, supported-brigade fires cells and CJTF FSCOORDs should track precision-guided munition capability, along with the five requirements for accurate predictive fire. Also, PGM capability needs to be reported and visible to the maneuver commander to ensure he understands both the capabilities and limitations of his organic precision-weapons systems.

Airspace management. Airspace management is often cited as the major reason for the limited use of Excalibur and other IDFs. Many maneuver commanders and fire supporters believe the employment of IDFs restricts the use of other systems sharing a given airspace. In some cases, the use of “hot-walls” or restricted operations zones limit the airspace for AWT, ISR and CAS. Another concern is the overall timeliness of effects on target. As Excalibur is always fired high-angle, more time is required to clear airspace than a low-angle mission. Time of flight also affects the timeliness and associated risks, where time of flight for direct-fire systems is significantly shorter. Typical time of flight for an Excalibur mission fired in theater is between 90 and 120 seconds, based on range. The greater time of flight equates to more opportunity for target movement or for civilians to enter the battlefield target area.

As surface-to-surface fires experts, fire supporters need to recognize these legitimate concerns and manage airspace to best integrate surface-to-surface IDF into the airspace-management framework. Units successful in Afghanistan use hot walls with multiple pre-cleared BIPs maximized to facilitate greatest coverage with the fewest restrictions. The phrase “hot walls” refers to a non-doctrinal, field-expedient restrictive airspace-coordination measure, built along the gun-target line with a predetermined width and altitude encompassing ballistic trajectory for the round and the BIP. BIP planning should be synchronized with the battlespace owner and integrated with airspace-coordination measures to support the AO. Units preparing to deploy to Afghanistan need to train on hot-wall development and airspace management supporting precision-fires employment. Training should integrate the brigade air element, task-force FSE and fires battalion. Only by working within the current airspace-management process and addressing the characteristics of current precision munitions will fire supporters be able to increase the use of these munitions.

The vast majority of the recommendations made in this article to increase Excalibur and surface-to-surface IDFs came directly from units currently fighting with fires in Afghanistan. There are many reasons for the limited IDF and Excalibur usage in Afghanistan; however, the seven focus areas (CJTF/RC FSE capability; combined-arms Excalibur live-fire training; FIST collective training; employment, institutional and field-artillery schools training; CAS employment; firing-unit capabilities; and airspace management) were the most prominent areas observed by the assessment team.

Overall, we found incredible work being done by fires battalions to develop TTPs and increase the use of Excalibur and IDFs. However, as with many issues concerning the delivery of IDF, it was the fire-support side of the equation where most of the challenges exist in regards to the employment of Excalibur and surface-to-surface IDF. Since the integration of fires with maneuver has historically been, and continues to be, the most difficult task in the delivery of fires, this is not surprising. Realizing this, fire supporters must increase our precision-munitions expertise, but, more importantly, we need to once again be ad-

vocates for surface-to-surface IDF, including Excalibur. This will ensure we have the fire-support expertise and experience required to support the maneuver commander, for the rest of this conflict and for the next, with all his IDF requirements.

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COL Gene Meredith is assigned to the Fires Center of Excellence at Fort Sill, Ok. He has served as a field artillery officer for 22 years, spending most of his career in Airborne units, including the 82nd Airborne Division, 18th Fires Brigade (Airborne), 173rd Airborne Brigade and Special Operations Command Europe. COL Meredith deployed to Panama, Iraq and multiple times to Afghanistan where, on his last tour, he commanded 1-321st Airborne Field Artillery Regiment, providing 155mm fires in support of 82nd Airborne Division.

MAJ David Moser was a previous member of the M777A2 and Excalibur fielding teams.

CPT Andrew Zikowitz's last deployment was as an M777A2 battery commander in Afghanistan, 2010-2011.

Daniel Hallagin is a retired 13D, field-artillery automated tactical-data-systems specialist. He is a Department of Defense civilian employee and a member of the Excalibur fielding team.

ACRONYM QUICK-SCAN

- AO** – area of operations
- AWT** – air weapons team
- BCT** – brigade combat team
- BIP** – ballistic impact point
- BOLC** – Basic Officers Leadership Course
- CAS** – close-air support
- CDE** – collateral damage estimate
- CJTF** – combined joint task force
- CTC** – combat-training center
- DIVARTY** – division artillery
- FACCC** – Field Artillery Captain's Career Course
- FCoE** – Fires Center of Excellence
- FDU** – force-design update
- FFA** – force field artillery
- FIST** – fire-support team
- FSCOORD** – fire-support coordinators
- FSE** – fire-support element
- FSO** – fire-support officer
- HQ** – headquarters
- IDF** – indirect fires
- ISR** – intelligence, surveillance and reconnaissance
- JFO** – joint fires observer
- MTO&E** – modified table of organization and equipment
- PGK** – Precision-Guided Kit
- PGM** – precision-guided munition
- POI** – program of instruction
- PSS-SOF** – Precision Strike Suite for Special Operations Forces
- RC** – regional command
- TTP** – tactics, techniques and procedures

Brigade Combat Team 2020

by retired LTC Robert W. Lamont

The force structure the Army carries into 2020 will define its vision well into this century. That structure will be shaped by the company-grade officers who walked the streets of Baghdad, who will mature into the field-grade staffs leading the equipment-acquisition and doctrinal-development processes of the BCT 2020 structure that takes the field. Like all previous generations, their experiences, good and bad, will greatly influence their decisions and actions as they shape the personnel, material and doctrine ahead.

Other shaping influences on the Army's force structure will be generated from the first five decades of this century (Table 1), with potential to influence our national character. Thus the force structure of 2020 will result from the training and operational experiences of the post-Global War on Terrorism generation, who will also face the new peer-competitor strategic landscape in the last half of this century with its associated economic and political challenges.

Since the importance of BCT 2020 force structure as we look ahead should not be

understated, it's therefore timely to explore possible organizational designs for the brigade combat team in the 2020 timeframe. In this article, I'll center not only on the mission, doctrine and capabilities demanded of the BCT to conduct full-spectrum operations, but I'll also discuss the BCT organizational design's ability to implement maneuver-based defeat mechanisms as a follow-on to initial-entry operations in many environments. Finally, I'll discuss the limitations that cost places on organizational changes and the constant dialogue that must occur while the Army prepares to disengage from current operating theaters in a resource-constrained environment.

Full-spectrum operations command and control

In discussing fleet tactics, Navy CAPT Wayne Hughes notes, "Doctrine isn't what is written in the books; it is what warriors believe in and act on."¹ One need only look at Field Manual 3-0, *Operations*, to realize that a decade of con-

flict has caused the Army to pause and reflect on what it believes. That reflection includes full-spectrum operations, a subject that now occupies its own chapter in the manual.

The chapter details the interaction between offense, defense and stability operations. It also sets that interaction against the demands to take initiative and operate at a faster tempo than the enemy to negate his effectiveness relative to the current battlefield situation. Also, it treats non-lethal operations in stability and civil-support environments with the same intensity found in the discussion of more traditional offensive and defensive operations. The Army realized that operating within the local population did not receive full focus when forces trained away from the local community. So, within the context of these full-spectrum operations, what does it mean to control tempo?

To better understand the competitive dynamic of seizing the initiative, a model of the process and interactions between friendly and opposing command-and-control systems is required. The Lawson

	2000	2010	2020	2030	2040
	Combat engagement	Disengagement	BCT 2020	Modernization	Flashpoint
Events	Company-grade personnel gain operational experience Current doctrine expands New technologies are combat-tested	Declining deployment tempo Field-grade personnel shepherd equipment modernization and organization Economic activity and lack of clear peer threat reduces budget support and industrial base	Structure fielded Training defines operational experience and mindset Future operational concepts defined and equipment requirements detailed	Concepts and requirements developed post-2012 begin to reach force Operational techniques experimented with under 2020 structure reach doctrinal maturity	China surpasses both USA and European Union in gross domestic product* World reaches oil-production tipping point Climate change disrupts food supplies Overpopulation increases all resource demand
Technologies	Unmanned aerial vehicles Command-and-control networks Satellite communications to lower echelons	Execution of 2012 Army Modernization Strategy: Joint distributed communications, Ground Combat Vehicle, artillery enhancements, air scout upgrades	Robotics Artificial intelligence Autonomous engagement	Defense acquisition and private industry developments	

Table 1. Developmental influences 2000-2040. These shaping influences on the Army's force structure have potential to influence our national character. *From www.photius.com, Photius Coutsoukis, 2010.

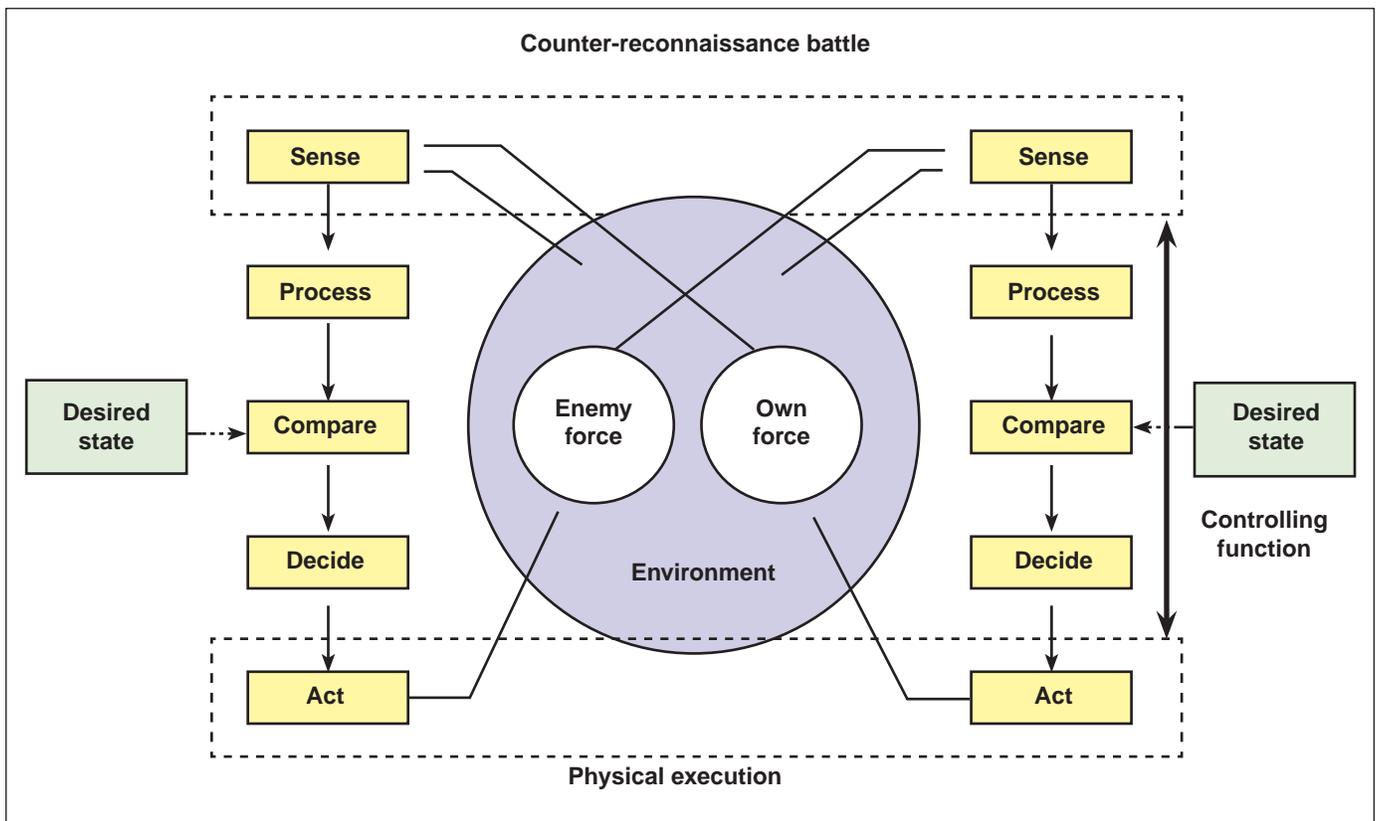


Figure 1. Lawson Command-Control Cycle. The Lawson model outlines how C2 information is used from initial input into the planning process through the implementation of force actions in the operating environment. Within the context of full-spectrum operations, the influence of civilian populations is included as part of the environment. BCT sensors collect information on the enemy and environment and process this against their own force data. This provides the commander and his staff situational awareness against which to compare their desired endstate. Any difference between the two becomes the basis for action orders to the blue force. Layered on top of the Lawson Cycle are key focal points for the force designer, such as the counter-reconnaissance battle, shown as the dashed box around the competing sensor functions. The ability to gain positional advantage is captured during the physical execution of the command cycle as the BCT's capabilities are translated from planning into battlefield action and effects. Connecting these two processes are the controlling functions of command, shown as an arrow. Visual, radio and digital communications serve to translate the commander's intent into action.

Command-Control Cycle is introduced in Figure 1 to visualize these processes.²

Table 2 details the actions available to each side to influence these key points within the C2 cycle and gain an advantage in terms of operational or tactical tempo in the process.³ Since we want to be able to gain an advantage over our opponent and seize the initiative, any future force structure must be able to muster these capabilities. By executing the command cycle faster than our enemy, we impose our will on his ability to influence the action; if we can stay ahead in this process, the action they do take will be of limited effectiveness since the operating environment will have changed by the time he is able to conduct his plan.

Joint context

The discussion within the Army's capstone document, *Operations*, clarifies that a single large-fix formation cannot support the diverse requirements of full-spectrum operations. Future BCT structures must work in the context of their roles in accomplishing the joint task force's intent. The Army's approach, us-

ing modular force structure, ensures the flexibility of accomplishing a range of missions. It has made the combined-arms brigade the main instrument for conducting maneuver-based campaign in a noncontiguous environment.⁴

Figure 2 provides a visualization of the phases and capabilities needed to implement high-end maneuver against a wide range of threats. As depicted, the first phase of our joint campaign is the seizure of a lodgment area by the early-entry force. This may demand a forcible

entry by airborne, airmobile or amphibious forces. Alternatively, invitation and support from the host nation may characterize early entry. These initial operations secure the area, facilities and conditions necessary to conduct subsequent decision maneuver ashore.

During the second phase, the BCT 2020 rapidly translates intelligence into actionable maneuver to ensure it retains initiative throughout the operation. With initiative, BCT 2020 causes the enemy to face an expanding array of tactical

Actions	Sensing	Controlling	Physical execution
Destroy	Attack it	Attack it	Mobility kill
Disrupt	Jam it - gains range	Jam it - gains time	Barrier employment
Deceive	False targets, chaff	False message traffic	False route, directions
Deny	Avoid sensors	Communications security, information assurance	Barrier and fires
Exploit	Detect enemy	Monitor enemy	Channel movement

Table 2. C2 focal points and influence.

threats he is unable to counter due to their rapidity, combined-arms nature and recurring positional advantage.

As depicted in Figure 2, for brigades to become the principal tactical unit for conducting maneuver-based operations, they must:

- Be organized to see the battlefield better than their opponent;
- Have the systems to challenge a full range of enemy action; and
- Link these two attributes together with a robust C2 architecture, able to more effectively transition to the command cycle.

BCT modernization

One of the key constraints in advancing a BCT structure for 2020 is that no additional funding will be available for material solutions. With that in mind, the 2012 Army Modernization Strategy becomes the baseline for proposed capability sets that are available for consideration as we focus on potential brigade organizations. Without getting into the detailed analysis of each warfighting function's material profile planned for the outyears, the following is highlighted as influencing future brigade designs.

Collectively, the fielding of the Joint Tactical Radio System, Warfighter Information Network-Tactical, Distributed Common Ground System-Army and Joint Battle Command-Platform will continue to improve the ability of the brigade to function within a JTF and control its own operations across a wide range of battlefield activities. The Kiowa Warrior upgrades will advance the brigade's ability to sense the environment and provide a better armed response when needed. Unmanned vehicles, ground and air, will provide more sensing capabilities to the brigade and allow for lower-risk target acquisition and engagement. Finally, the planned Ground Combat Vehicle modernization will support better mobility and protection for our mounted infantry as they face an array of tasks across the full spectrum of conflict, which demands "boots on the ground" to successfully engage and bring the mission to closure.⁵

Figure 3 proposes the BCT organization for the 2020 timeframe. Most of this structure is familiar to those with a heavy-brigade background. What jumps out as new is the addition of a composite helicopter squadron directly under the control of the brigade. While the interim and final command relationships of this organization are up for discussion, the intent is to provide the brigade direct and responsive aviation support demanded by full-spectrum operations.

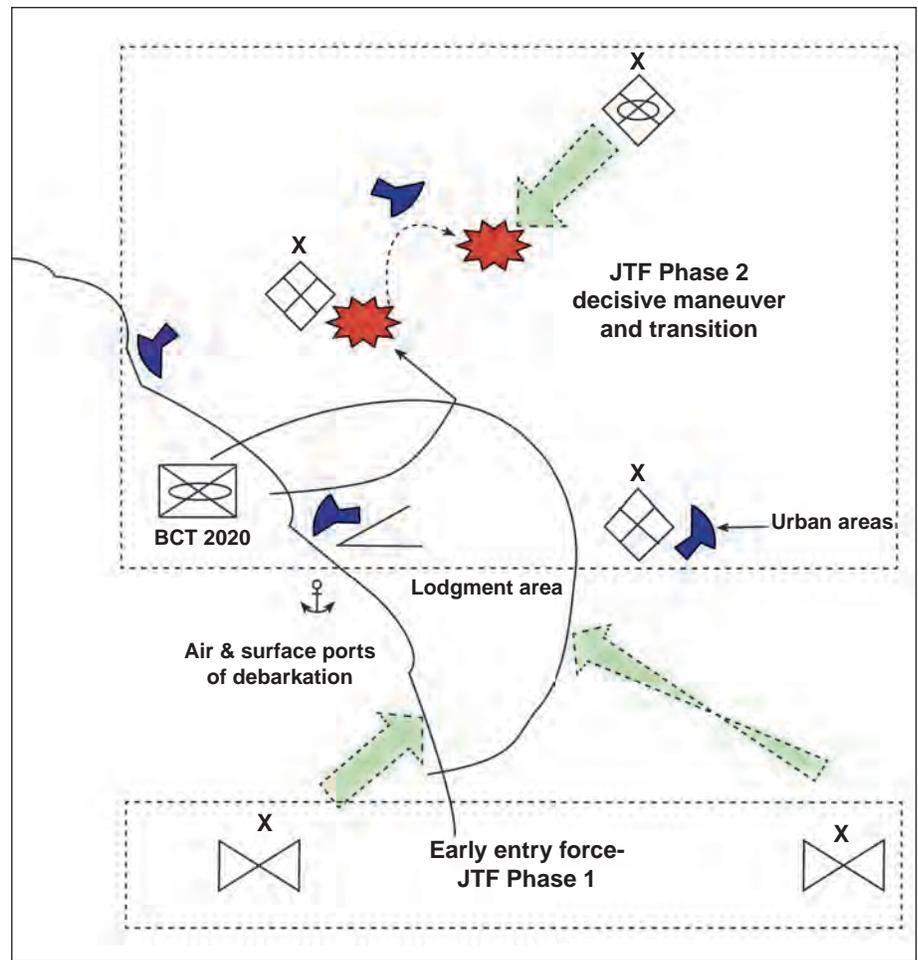


Figure 2. Joint campaign phasing and maneuver.

The capabilities of such a squadron would allow additional aerial reconnaissance, vertical mobility for both assault and sustainment, and attack options characterized by speed, accuracy and lethality. These are hallmark capabilities required to develop that expanding array of tactical threats needed to seize and retain the initiative and exploit maneuver as a defeat mechanism.

The influence of such a brigade structure clears during movement beyond the perimeter of the lodgment area. Maneuver options on this perimeter increase at a rate of 3-to-1 for each step the brigade extends the perimeter.⁶ However, if we can expand our thinking away from the limitations associated with a linear representation of the battlefield, the addition of air mobility allows the brigade to strike at any point with range. This opens the maneuver potential exponentially, greatly complicating the threat's ability to focus on a single line of advance. In this way, the combination of airmobile reach and speed compound the hitting power of heavy ground-maneuver units. Enemy actions taken to counter one threat, such as dispersing to cover possible landing sites to his rear, make him vulnerable to the capability set of the other arm of our brigade ground-maneuver triad. This places the enemy on the

horns of a dilemma, from which he loses the initiative.

The composite helicopter squadron has the potential to be tailored for each mission and operating area. As a starting point, this organization would include six attack aircraft, six light-lift aircraft, 12 medium-lift aircraft and six reconnaissance aircraft. Also, the organization provides the operating headquarters for unmanned aerial vehicles. Finally, the headquarters provides the logistic and maintenance support appropriate for this number of aircraft to the squadron.

The other twist to the brigade structure is the addition of a dismounted-infantry battalion. This returns the triangular nature to the brigade structure and extends its ability to operate across the full spectrum of conflict. It is somewhat ironic that operations at the "lower" end of the spectrum of conflict are manpower-intensive to execute, but this is necessary. In short, positive interaction with local populations demand dismounted infantry for success. Whether walking security patrols, engaging in humanitarian relief or completing civil-affairs projects, it is Soldier-to-civilian contact that defines national presence. At the middle and upper end of the spectrum of conflict, this dismounted element adds stay-

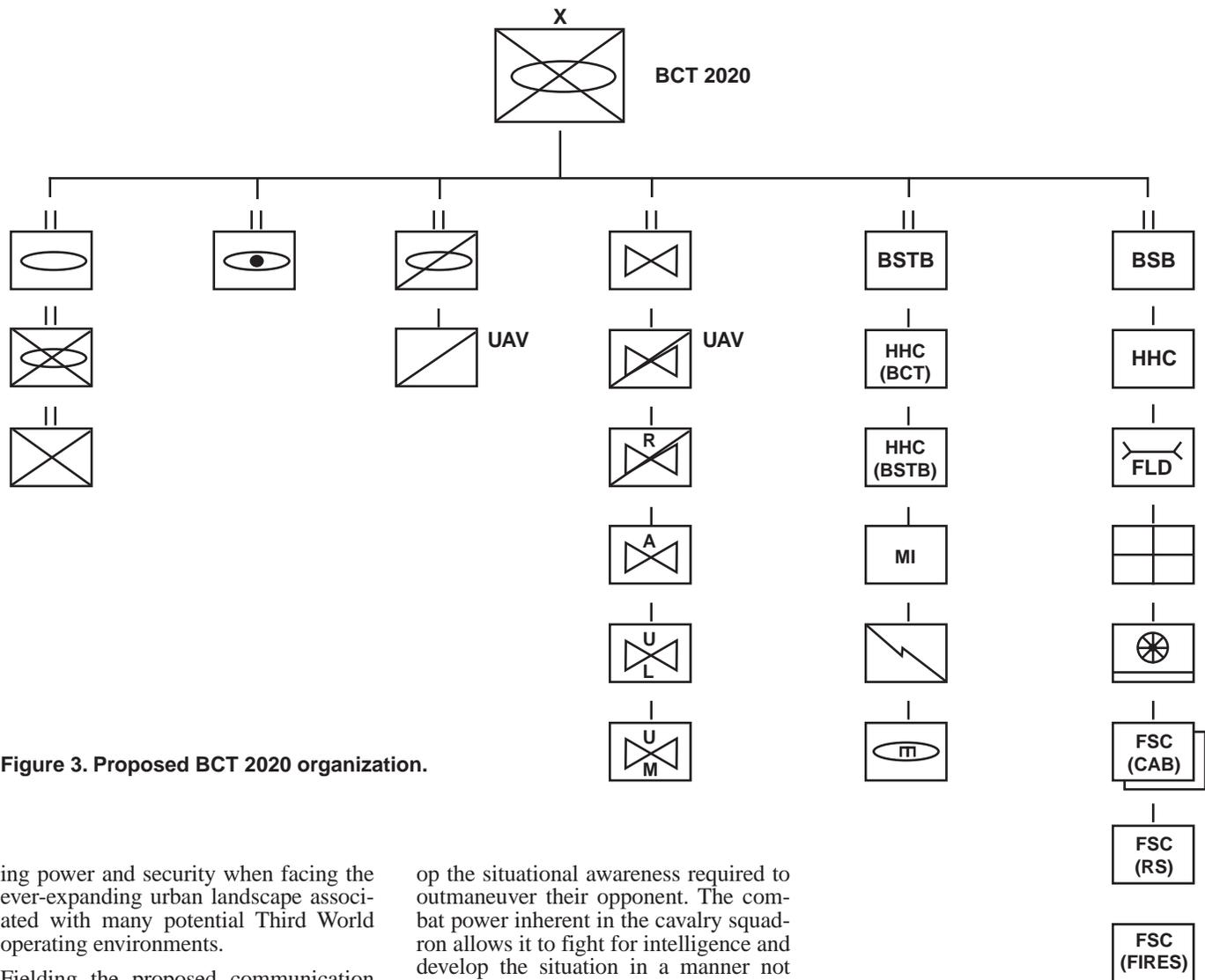


Figure 3. Proposed BCT 2020 organization.

ing power and security when facing the ever-expanding urban landscape associated with many potential Third World operating environments.

Fielding the proposed communication suite will allow the brigade to combine combat functionality in new ways. Figure 4 provides insight into a few of the possible combinations available under the 2020 charter. The brigade has three functional groupings that provide a framework for cross-coordination and support rather than formal command structures, including:

- A ground maneuver element;
- An aviation combat element; and
- A combat-support and combat-service-support element.

BCT elements

Cavalry. The cavalry squadron within the ground-maneuver element provides the brigade the ability to conduct economy-of-forces missions during high-intensity operations beyond the lodgment area. It screens open flanks, provides route security and sets the stage for the three maneuver battalions to engage the enemy on favorable terms. Also, it adds eyes on the battlefield to collect and pass on the raw information needed to devel-

op the situational awareness required to outmaneuver their opponent. The combat power inherent in the cavalry squadron allows it to fight for intelligence and develop the situation in a manner not achievable by similar organizations that must depend on stealth as their sole mechanism for accomplishing the collection of battlefield information.

Mobility. Since maneuver is a recurring theme around which our BCT 2020 structure is built, it should come as no surprise that mobility would form a key point of discussion as we explore how the various parts of the brigade work together. The dismounted-infantry battalion will use the speed inherent in light and medium helicopter lift to secure chokepoints, block enemy action and control routes, and in so doing ensure the forward movement of the heavy ground battalions. In other scenarios, trucks will provide their mobility as they follow in close support of the rest of the ground-maneuver element.

Engineers. The doctrinal mobility role of the engineer company remains consistent with current practice and is a key capability in the brigade, exploiting maneuver as a defeat mechanism. Augmenting the gap-crossing capability of this organization will have to be ex-

plored. This is driven by the fact that drainage patterns historically move from higher elevation inland to the coastal plain, creating potential gaps along any route of lateral expansion from the lodgment area. Fortunately, since the brigade is operating within the context of a JTF, naval units can support some of these gap-crossing requirements when such a capability is demanded in and around the littoral. In some scenarios, more engineer assets may well be demanded given the difficult nature of the operating area or the counter-mobility capability of the enemy.

Communications and command. To see the battlefield, the brigade's enhanced communications and command suite will link all the organization's sensors to provide a unified common operating picture of friendly, enemy and non-combatant players within the battlespace. Ground-maneuver reports, UAV downlinks and reconnaissance helicopters will feed the target-acquisition process as fire-support centers rack and

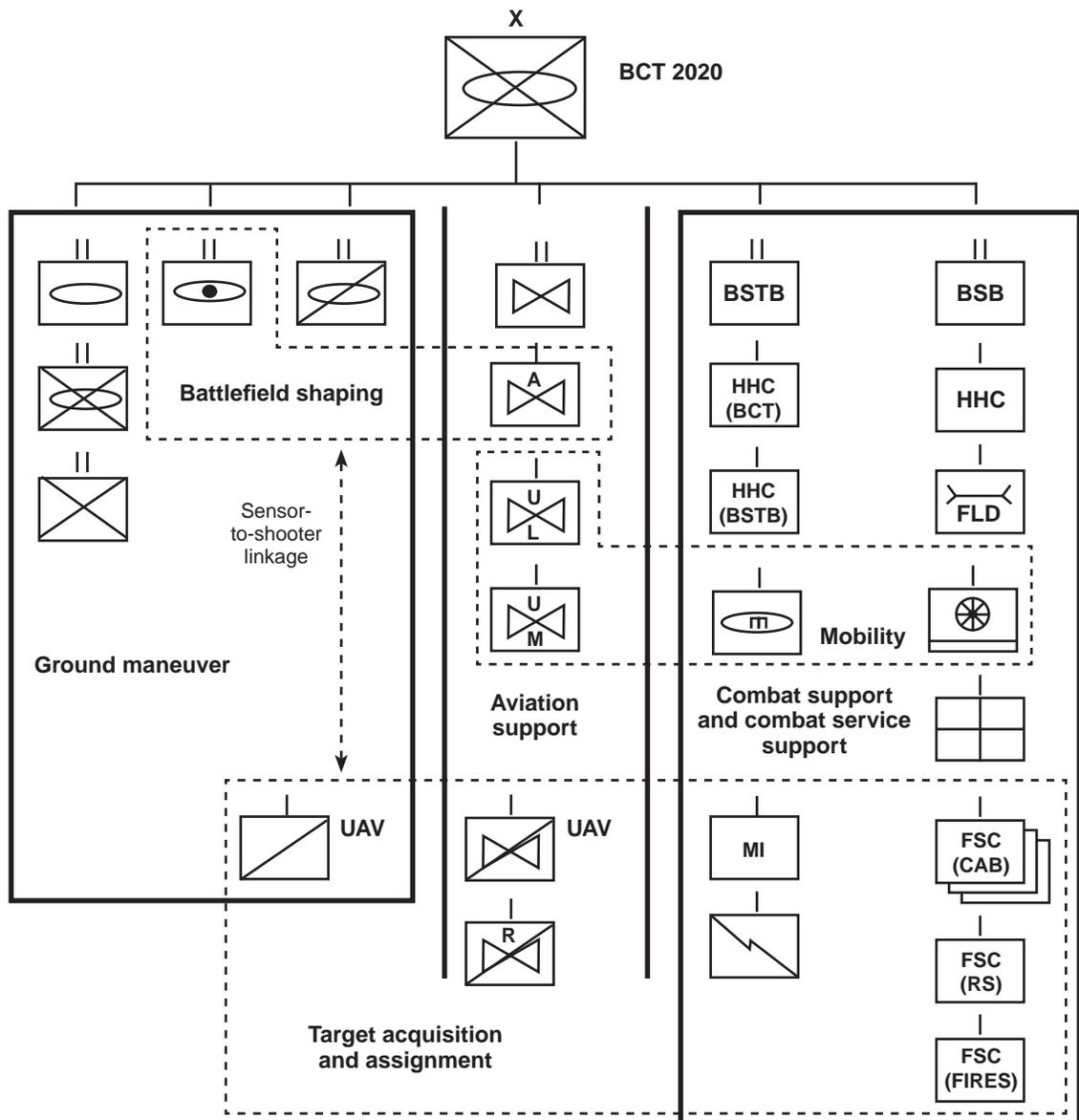


Figure 4. Battlefield functional alignments.

stack targets consistent with the commander's priorities and joint-force rules of engagement. The brigade will be able to shape the battlefield to facilitate ground maneuver by directly linking these sensors to the shooter executing the attack. This direct linkage has the potential to reduce response time and, in so doing, increase the relevance of these attacks while reducing potential fratricide and collateral civilian damage.

Prepositioned-equipment support

While these examples of combined combat show the capabilities of the brigade, the same technique can apply to the lower end of the conflict spectrum. During humanitarian operations, medical, transportation and engineer units can combine to move supplies, restore basic services and provide medical assistance when host-nation services have broken down either due to enemy action or natural disaster.

The helicopter lift greatly extends the range of such operations and provides quick response and support before any rebel or enemy forces can secure popular favor during times of stress. Since helicopter lift can operate independently of the host nation's road network, it provides the brigade's leadership options to counter route-based threats or continue operations in the face of a heavily damaged transportation system. In this scenario, it may well be the combat-service-support element that is the focus of effort for the brigade. Combat units in this case would operate in a supporting role by providing the security force needed to allow humanitarian operations to proceed unencumbered.

However, stationing these maneuver brigades will require a combination of forward-basing, Army prepositioned afloat and in-continental U.S. positioning to exploit the shortening strategic timelines of an uncertain world. While forward-basing options may be limited, they represent dramatically shortened air-trans-

portation requirements that have potential to reduce the amount of lift demanded for a deployment and the time needed to execute. When this potential combines with the APA equipment sets, the BCT 2020 is able to deploy in a minimum amount of time. The combined operational reach of APA and air deployment offers the best odds of exploiting the strategic surprise resulting from initial-entry operations and, in so doing, sets the stage for further maneuver beyond the lodgment area.

Finally, adding this same approach with the extended deployment leg associated with stateside basing provides the same deployment options but at a higher cost in airlift assets. Balancing these modernization options will demand a cross-service look at the joint-capabilities needs down the line.

Training BCT 2020

While organizational charts provide some insight into future force design, the

reality remains for any operational unit: if you can't train it, you can't fight it. Meeting the Army's standards for brigade-level-and-below training is achievable within the current National Training Center infrastructure. A larger, and in some way more important issue, is whether BCT 2020 can be trained within the context of full-scale JTF employment.

This implies a JTF training location as rigorous in its operating environment and evaluation methodologies as those found at the service level for the Army at Fort Irwin, CA; the Air Force at Nellis Air Force Base, NV; or the Navy at Corona Naval Surface Warfare Center, CA. As we build new force structures in the 2020 timeframe, they will demand a modernization of the JTF training environment as well. This training environment will require the full instrumentation of the operating forces to establish ground truth as a basis for detailed and rigorous after-action reviews.

Most of the pieces for such a training arena are currently in place. Ground-truth data in terms of time, space and position are currently captured at the service level for three of the services as indicated above. NSWC Corona has the facilities to pull all this data together and provide near-real-time exercise reconstruction to support the JTF AAR process. By linking the Southern California naval-operating areas with ground and air maneuver space from Irwin, Twentynine Palms, Nellis, Chocolate Mountain and Yuma, the services can build a JTF operating area of enough size, environmental complexity and diversity to fully challenge any future brigade or JTF force design.

This will continue to increase in importance as the range of sensor and weapon systems expands; the ability to fully exploit their inherent capability will become increasingly difficult as these capabilities outstrip the confines of many current operating areas. The maneuver space afforded the JTF commander on the West Coast is unique and should receive special attention in the resource-constrained moderation that awaits all the services.

Interactive organizations

The BCT 2020 structure promotes Soldier development by bringing together diverse branch experience while focusing the entire organization on accomplishing a single mission. This structure brings straight-leg infantry, mechanized infantry and Armor Soldiers into routine contact with each other to share professional insight and lessons-learned. Aviation capabilities interweave into an operational array as they support maneuver and sustainment operations across the battlefield. The combat multipliers inherent with combat-support and combat-service-support, especially as it applies to the lower end of the spectrum of conflict, are visible across the brigade structure as each organization contributes its role in mission accomplishment. This inherently interactive organization provides a testbed for future operational designs and serves as a proving ground for the development of maneuver soldiers across the brigade.

In fact, these very interactions in the middle- to late-2020 timeframe will drive future operational-concept development and material-requirements definition. This should add importance to the need to field a dynamic brigade structure that explores ground- and air-mobility options within a maneuver-based paradigm as the Army prepares for a range of potential operational scenarios. The ability of a new generation of Soldiers to solve these increasing complex operational problems will be instrumental in our national survival.



Retired U.S. Marine Corps LTC Robert W. Lamont served as an exercise action officer for III Marine Expeditionary Force in Okinawa, Japan, planning Tandem Thrust in Australia and Cobra Gold in Thailand. Other assignments included operations analyst in the Studies and Analysis Division, Marine Corps Combat Development Command, completing analyses for anti-armor force structure, combat identification and the Advanced Amphibious Assault Vehicle. He also

served as a tank company commander and assistant operations officer with 3rd Tank Battalion, Twentynine Palms, CA. His service afloat includes executive officer, Marine Detachment, USS Constellation, and combat cargo officer, USS Cleveland. His military schooling includes the Basic School, Quantico, VA; Armor Officer Basic Course, Fort Knox, KY; and Armor Officer Advanced Course, Fort Knox. He holds a bachelor's of science degree in management and technology from the U.S. Naval Academy and a master's of science in operations research from Naval Postgraduate School. He is a silver-level member of the Order of St. George.

Notes

¹ Hughes, CAPT Wayne Jr., U.S. Navy, *Fleet Tactics, Theory and Practice*, Naval Institute Press, Annapolis, MD, 1986.

² Ibid.

³ Ibid.

⁴ *Operations*, Department of the Army, Washington, DC, February 2008.

⁵ Army Modernization Plan 2012, Department of the Army, Washington, DC, May 2011.

⁶ Since π = circumference (C) divided by diameter (D), and we know that the diameter is twice the radius (R), it follows that $C = 2 * R * \pi$. However, we are only interested in the landward side of the circumference, which is the perimeter (P), so divide by 2 and we determine that $P = \pi * R$. Finally, we approximate π as three and somewhat understate the rate at which the linear maneuver space expands.

ACRONYM QUICK-SCAN

AAR – after-action review
APA – Army prepositioned afloat
BCT – brigade combat team
C2 – command and control
JTF – joint task force
NSWC – Naval Surface Warfare Center
UAV – unmanned aerial vehicle

No Two the Same ... One Cavalry Troop Commander's Lessons-Learned in His Afghan Area of Operations

by CPT Jason W. Lopez and SGT Matthew E. Snow

This article is essentially an after-action review of the tactics, techniques and procedures my unit – Team Blackfoot, 3-89 Cavalry – successfully used in our area of operations in the Mayden Shar and Jalrez districts of Wardak Province, Afghanistan, from October 2010 through October 2011. The terrain we owned began transitioning to Afghan control in December 2011, less than two months following our departure.

As a troop, we did nothing new or revolutionary. We nested our mission with the squadron's overall goal of providing security and stability to allow host-nation forces time to build the structure necessary for transition to Afghan primacy in government and security. My Soldiers and I followed two main principles: respect and empowerment. The focus on respect was universal in relations with our counterparts in the government of the Islamic Republic of Afghanistan, local and national police, national Army and citizenry.



CPT Jason Lopez talks with a village elder about orchard-management classes. Building relationships on a personal level is arguably the most important tenet of enabling security and stability in a unit's battlespace. This extends past cookie-cutter questions about bad guys and village wants – it involves knowing the elders and their families and actively seeking to understand what the village needs. (Photo by SFC Glen Bennett)

The empowerment was first aimed at village elders and the local and national police due to the lack of Afghan National Army in our battlespace – and then, with the arrival of ANA elements, at an ANA capable of security primacy.

The intent of this article is to show a way – not “the” way – to succeed in the diverse and challenging country of Afghanistan.

Different valley, new challenges

I must first emphasize that every valley in Afghanistan is unique. This is a simple idea but widely dismissed or ignored. No overarching strategy implemented at the national and, in many cases, provincial level will work. The key is empowering district leadership to determine what fits their district’s specific problem set. Very simple solutions may produce outstanding results in one area, while several terrain features away, it may reap little or no reward.

Knowing your battlespace and the people and personalities within is another key element. Understanding the local power structure is crucial to developing lasting security, stability and growth.

Our AO had an agriculture-based economy. Its only major export was apples. Most people maintained subsistence crops to support their families and used the income from selling apples to purchase what they were unable to produce on their own. This revenue stream was limited, however, as only the best apples (aesthetically speaking) were for sale. The people consumed the remaining apples, or they discarded them.

Through coordination with the U.S. Department of Agriculture and the Afghanistan Ministry of Agriculture, we worked to introduce means of using these “ugly” apples for further economic gains. Several classes provided instructions for the construction of juicers, sauce makers and composters. This educated farmers on more avenues for use of these surplus apples, thus allowing for more economic diversity and growth.

Empower the future

Once you understand the political terrain and balance of power, you must enable (and sometimes force) district-level GIRoA to take ownership of their AO. If the district governor and line ministers are not enthusiastic about a specific course of action, the plan is destined to fail. Sometimes what seems like common sense to us is the opposite in the eyes of our Afghan counterparts.

Continue to empower local elders. Their buy-in is crucial. Without it, no matter how much we push an action, it will fail. Cut through the complaining and identify their actual issues. Like Louisiana political legend Huey Long’s promise of “a chicken in every pot” – which made for good radio but was ludicrous – the idea that “a well in every qulat” is much the same. Pinpoint key needs, figure out how to provide for them by, with and through GIRoA, and execute. I would bet a month’s pay the results will be increased peace and security.

We accomplished this in our AO by holding weekly jirgas at the district center involving the sub-governor, line ministers, district police chief, local police commander, U.S. Agency for International Development representative, U.S. Department of State representative, ANA commander and International Security Assistance Forces leadership. These meet-

ings allowed us to identify problems, discuss solutions and enact a unified course for addressing them.

Eliminating need for ‘us’

ISAF elements present positively due to their level of professionalism and rapport with local elders and citizenry. Nonetheless, these individuals realize we are going to leave. Our solutions, while good in the short term, are temporary. They know this. The “one-tour wars” we’ve fought for the last 10 years have led to widespread cynicism due to unmet promises. Some projects promised by previous units often have gone unfulfilled due to new priorities and difficulties with Commander’s Emergency Response Program funds. The answer is to have GIRoA intimately involved in any development and conduct the resourcing by, with and through them. This will ensure continuity and follow through. ANA and the district sub-governor, with ISAF oversight, should monitor civil affairs plus CERP.

The ANA in Jalrez operated at a very high level almost from their arrival in our battlespace. They conducted independent route clearance within a month and took the lead in key-leader engagements in the first few months. Unfortunately, however, when they were tasked to a different district for most of the fighting season, security decreased in the valley. ANP is the solution, and increased resourcing and training is the key.

Establishing a competent and functioning intelligence collection and investigative department is also crucial. Identifying, arresting and prosecuting destabilizing individuals will go a long way in increasing security. Removing these individuals will buy time for Afghan National Security Forces and GIRoA to build rapport, confidence and competence in the eyes of the local populace. This will deny the enemy freedom of maneuver and eliminate power vacuums in areas where the GIRoA is seldom heard and is never seen.

ISAF forces should assume a “follow and support” role in working with ANSF and GIRoA. All KLEs and line-of-effort meet-



1LT Brad Boone discusses the possibility of starting a sports league in one of our more permissive areas. Empowering junior leaders to take ownership of their respective AOs will allow battlespace owners wider breadth in understanding the dynamics of their district. (Photo by CPT Jason W. Lopez)



Wardak Provincial Governor Fidai addresses a large audience of civic leaders at the announcement of Afghan local police recruitment in the Jalrez District. The facilitation of an active, transparent government that works by, with and through the constituency it represents is the endstate we strive to reach. (Photo by CPT Jason W. Lopez)

ings should be driven by our counterparts, not time hacks. ANSF – with ISAF oversight and support – should plan and execute missions. The sooner you take the training wheels off, the sooner the ANSF will take ownership of their battlespace. Negative influencers and incompetent Afghan leaders should be removed as soon as it is evident they present no value to the way ahead.

In our AO, we began training Afghan officers and noncommissioned officers in basic skills, which they, in turn, trained their soldiers on. They rehearsed these skills on the combat outpost before putting them into practice on patrols throughout the battlespace. This allowed the ANA to gain competence and confidence in their abilities, while also showing the local citizenry that the ANA was capable of ensuring security and filling the vacuum left when ISAF personnel eventually leave the area.

Peace, the Afghan way

Once we identified the main powerbrokers in our battlespace, we began to work on establishing a peace council, including pro-GIRoA and pro-insurgent elements. This paid immediate dividends, as significant activities in our battlespace dropped significantly and pro-insurgent elements began to discuss their future involvement in securing their local areas in conjunction with ANSF elements. They were not interested in reintegration yet but with time, this seemed like a genuine possibility.

The death of Burhanwaddin Rabbani, the High Peace Council leader for reintegration, may be the death toll for this, and thus the end of reintegration. Looking at it through the lens of common sense, I believe that the Hezb-e-Islami Gulbuddin, an Afghan Islamist political party, caught the last train leaving the station. “Reintegration” runs by a rotation of ISAF units who change

every year (and soon, in nine months). The promise is not that they will not attack any American or coalition member – they say they will not attack the unit they are sitting across the table from. As the cast of characters change, so do the rules. Every “reintegrate” is one stray bullet away from being your local bad guy again. Everything in Afghanistan is on an individual basis. The only time Afghans band together is to expel outsiders. The same guy who swears on the Koran that he is my brother could be the same “dushman” who launches rockets at your COP. His “peace” is with me. Enshallah to everyone else. This is the reason “reintegration” will not work.

Changing the ‘culture of cool’

In our specific battlespace, we saw a predominance of unemployed or underemployed male teenagers acting as instigators for the insurgency. To re-direct their energies, we need to attempt to change the “culture of cool” by redefining exactly what “cool” is for the children of Afghanistan. This one is tough, as we haven’t yet mastered it in the United States. Establishing local leagues of taekwondo, cricket, volleyball, soccer and boxing will foster family, clan, village, tribal and ultimately, national pride if tied in with other nations such as Pakistan, Iran and India. Most importantly, it will co-opt their desire for jihad, much as soccer does for Ireland vs. England and Croatia vs. Serbia.

This will require support of fathers and grandfathers, as these are the people the young “jihadi” attempts to appease through disruptive, and often violent, action. This will also strengthen the nuclear family through the process of a family activity outside of agriculture and prayer. It will also help erase political biases



Improving Tactical Reconnaissance – Back to Basics

by SFC Bryan E. Lackey and COL Brett C. Jenkinson

Observations at the National Training Center, Fort Irwin, CA, indicate our task-force scout platoons have lost some basic skills that must be retrained and regained to ensure the Army's continued success in combat. This article provides specific observations from more than 20 brigade combat team rotations at the NTC with subsequent recommendations.

Shortcomings start at the top. Many TF staffs fail their scout platoons for the following reasons:

- Improper scout platoon employment;
- Inability to clearly enunciate tactical tasks; and
- Inability to manage reconnaissance and surveillance assets.

How we employ scouts

Due to the nature of the counterinsurgency fight in Iraq and Afghanistan, most units arrive at the NTC with no intention of using the TF scout platoon for doctrinal purposes (route/zone/area reconnaissance or reconnaissance in force). Typically, the commander or S-3 operations officer tasks the scout platoon's re-

connaissance squads to conduct mounted and dismounted security, or serve as the personal-security detachment for the battalion commander and command sergeant major during their battlefield circulation. The sniper squad's three sniper sections are then task-organized to support companies.

To make matters worse, TF staffs rarely provide the scout platoon good, doctrinal tasks that employ them in doctrinal roles during missions. In fact, most scout platoon leaders and platoon sergeants never work according to their doctrinal roles. Very few scout platoon leaders or platoon sergeants have attended any institutional training courses to learn their craft. Thus, platoon leaders and platoon sergeants do not know how they *should* be employed.

Tasks we give scout platoons

TF S-2 intelligence officers and S3s rarely give the scout platoon sound doctrinal tasks – specifically to confirm or deny an element of the S-2's enemy situational template. Even when tasking the scout platoon to observe a named area of interest,

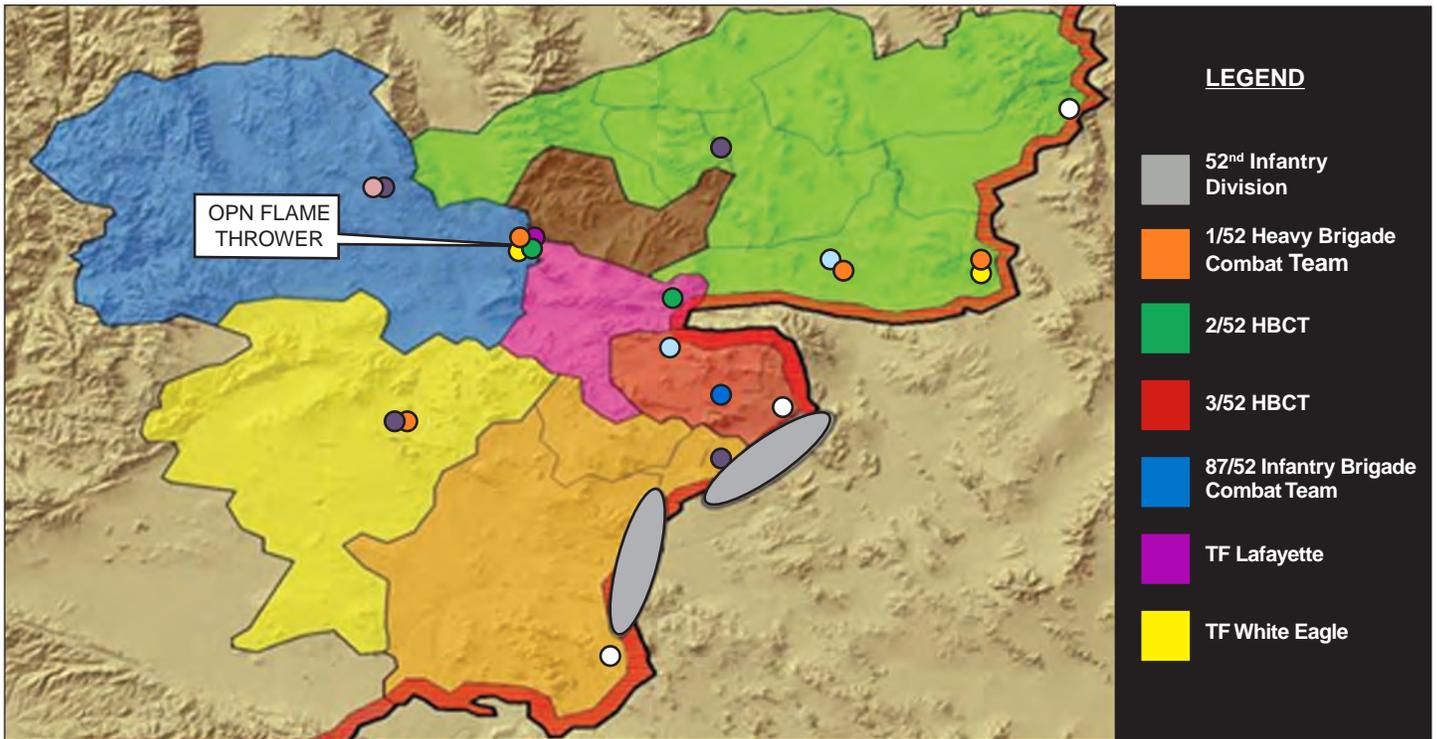


Figure 1. Sample of the top of a CSM report.

such as an improvised explosive device hotspot, S-2s or S-3s rarely focus observation times for the scouts or define the specific reporting requirements.

A good task might read like: “Observe NAI 3108 from 110400JUL11 to 110700JUL11 IOT PID IED emplacement; O/O conduct CFF Tgt AD 3105 to destroy IED emplacers; BPT conduct TSE on POI.”

Regardless, whether the staff tasks the scout platoon to conduct reconnaissance to fill an incident report pertaining to an enemy situation template or an IR to fill an intelligence gap on a personality target, the written tasks must be clear. For example: “Collect a facial photo of Hask Hafiz IVO Ertabat Shar NLT 122100JUL11 IOT assist in PID of TF HVT #4.”

Once written, S-2s and S-3s fail to capture the collection task properly. Figure 1 shows the collection synchronization matrix

the S-2s typically use as a briefing tool. The CSM typically lists brigade-and-above assets, including national technical means. Worse yet, the TF scout platoon is rarely included in the CSM.

TF S-2s would do well to avoid using the CSM as a planning tool. The tabular R&S matrix, Figure 2, or an information-collection matrix is better for planning (orders). These matrices are simpler and more descriptive for junior leaders who lack exposure to most of the reconnaissance platforms shown on the CSM.

Solutions

Solutions to fix problems at the TF level. Most TF staffs improve their use of the scout platoon during a rotation at the NTC. However, to the scout platoon, the staff’s inefficiency and experimentation with them is frustrating. Barring formal train-

DTG: _____
 Mission: _____

Reconnaissance and surveillance matrix

Priority	NAI	Start	SIR/ Instruction	RECON	CO A	CO B	CO C	MORTAR	HHC	SNIPERS	FIST	Coordination	Remarks
		Stop											

Figure 2. Sample of a R&S matrix.



ing, S-3s and S-2s should task the scout platoon leader and platoon sergeant to provide the staff a capabilities brief. Such a brief might remedy the staff's failure to assign doctrinal tasks in accordance with Field Manual 3-20.98, *Reconnaissance and Scout Platoon*.

The finer points of reconnaissance management may require some formal training. The solution for staff shortfalls is attending one of many intelligence, surveillance and reconnaissance top-off courses offered by the Intelligence and Security Command's Foundry Program. An ISR management course provides students planning guidance to overcome shortages in reconnaissance holdings. Instruction includes tips on cueing, mixing and reconnaissance redundancy. Clearly enunciating reconnaissance tasks also helps intelligence officers.

Shortcomings at the scout-platoon level. Combining the staff's inability to focus collection times, poorly written tactical tasks to the scout platoon and weak individual skills in the platoon, a simple task to confirm or deny an action inside an NAI results in ineffective persistent surveillance. Scouts are generally weak at infiltration of an observation post. Thus, persistent surveillance from that OP results in terrain denial; the enemy watched our scouts occupy our OP. Hence, we fail in objective reconnaissance. This is failure in the basics of reconnaissance: find the enemy, obstacle or route and report it. At the scout-platoon level, we routinely observe atrophied basic skills:

- Poor troop-leading procedures;
- Lack of proficiency with organic equipment (specifically radios, computers and navigation aids);
- Poor fieldcraft; and
- Lack of doctrinal knowledge

TLPs – the start of something good. Specific shortfalls lie in scout-section and team-leader skills in conducting the pre-com-

bat inspection and, later, the pre-combat check. Leaders seem hesitant to force scouts to lay out required equipment for a mission, a practice snuffed as “old fashioned” or beneath the expertise of the “special men” of the scout platoon! Later, leaders fail to execute PCCs prior to movement. The results are troopers who carry non-essential equipment and forget the essential equipment. Batteries are dead; navigational aids are not prepared with waypoints; leaders leave paper maps and fires overlays; etc. Scout leaders must have separate PCI and PCC check-lists.

We also get lazy following issuance of our warning order. Leaders do not use available time to prepare and rehearse individual scout tasks. They do not maximize use of company intelligence-support teams or the battalion S-2 shop, where there are invaluable computer-software tools to help scouts select the optimal OP prior to leaving the wire. Blue Force Tracker, Speed software, Falcon View, Arc GIS and many more have line-of-sight analysis tools. At the tactical level, LoS is undeniably the single most important factor affecting scout-platoon performance.

Equipment woes – the best kit in the world. We also observe trends in units' failure to use available time during TLPs to prepare mission-essential equipment, including Global Positioning System equipment, lightweight laser-designating range finders and night-fighting equipment: night-vision goggles, aimpoint lasers, thermal sights, etc. If we are successful in preparing this equipment, we are not especially adept at employing it, especially in the dark. These are all the tools that can make scouting remarkably more pleasant.

A scout can avoid dirty work and the infiltration if he uses his route-selection tools properly. Because we have lost much of our ability to read a map well, specifically our ability to identify intervisibility lines, computer software has become especially important. If used properly, it can allow a scout to walk upright

almost entirely to his OP, yet remain completely undetected. BFT, Speed, Falcon View and Arc GIS are all programs that can help us plan routes.

If we do occupy a hide site effectively, we often have trouble sending reports back to the TF S-2. A good baseline understanding of wave theory can help scouts maximize the use of multiband radios like the PRC-117G. Once mastered, the 117G provides a digital-communications capability that has eluded scouts for years. It allows long-haul communications and the ability for scouts to transmit more than voice reports. Now photos, tactical chat and even short videos of reconnaissance objectives are available for sharing.

Fieldcraft – expertise earned, not taught. Mostly due to 10 years of combat conducted from a forward operating base or combat outpost, fieldcraft skills are all but lost – an atrophy not sparing of scouts. We seem to have lost the ability to stay “in the woods” for more than 24-28 hours without detection. Priorities of work, personal hygiene and field-sanitation skills are a distant memory.

While in an OP or hide site, unhealthy and unsustainable conditions are due to scouts failing to conduct weapons maintenance, personal hygiene or field sanitation. None of this is due to their being bad or poorly disciplined Soldiers – they have never been trained to a standard. Early detection, sickness and failure to report required information is the result.

Nobody is too cool for doctrine. While it smacks in the face of 10 years’ of combat experience, almost all the solutions for scout-platoon shortfalls lie in training doctrinal tasks according to FM 3-20.98. These are tasks taught at the Army Reconnaissance Course or the Reconnaissance and Surveillance Leader’s Course at Fort Benning, GA. While both courses are enough for the TF scout platoon, the latter focuses more on long-range surveillance units rather than the scout platoon. In either course, leaders from staff sergeant and up can gain the skills required to plan and execute scout-platoon tasks.

Training shortfalls are a product of the Army Forces Generation model. Deploying Soldiers often eliminate attendance at formal schools during their unit’s struggle to satisfy pre-deployment tasks. The cost of sending a leader to school is absenting him

from completing another “mandatory” task. To prepare ourselves for our contingency expeditionary force requirements, we must get back to our scouting basics.

Conclusion

This article combines nearly two years of observations that indicate poor trends in scout-platoon performance. Difficulties originate in the task force staff:

- Improper scout-platoon employment;
- Inability to clearly enunciate tactical tasks; and
- Inability to manage R&S assets.

Fixes for the staff are relatively simple: read FM 3-20.98; get a capabilities brief from the scout platoon leader and platoon sergeant; attend some Foundry training like the ISR top-off course.

Scout platoons are not without fault. Many problems within the platoon originate with:

- Poor TLPs;
- Lack of proficiency with organic equipment;
- Poor fieldcraft; and
- Lack of doctrinal knowledge.

Fixes for these are straightforward: carry different PCI and PCC checklists; conduct hands-on training with organic equipment prior to field training and during any down time; go to the field and stay out more than 72 hours without external support; and, most importantly, go to school!

Once leaders get our scout platoons and TF staffs back to the basics, our scout platoons will demonstrate their collective greatness. TF S-2s, S-3s and commanders have everything to gain when scout platoons become the hyper-performers they have always been!



MSG Brian Lackey is relocating to 7th Battalion, 10th Cavalry, Fort Carson, CO, after serving as a combat trainer for Tarantula Team, Operations Group, National Training Center, Fort Irwin, CA. He also served as a platoon sergeant and senior scout for 6th Battalion, 8th Cavalry, 4th Brigade, Fort Stewart, GA; and in-



Scouts in an OP. (Photo by COL Brett Jenkinson)



Scouts provide security after performing an assault on local area role players at NTC.
(Photo by SSG Austin Pritchard)

structor, 1st Battalion, 16th Cavalry, Fort Knox, KY. His military schooling includes Airborne School, Fort Benning, GA; Air Assault School, Fort Campbell, KY; Rappel Master, Fort Campbell; Tactical Tracking Operations School, Fort Irwin; Electronic Warfare School, Fort Irwin; Primary Leadership Development course, EUSA Wightman NCO Academy, Korea; Basic Noncommissioned Officer's Course, Fort Knox; Advanced Noncommissioned Officer's Course, Fort Benning; and Observer-Controller Academy, Fort Irwin. The Bronze Star, Purple Heart and Meritorious Service Medal awardee holds a bachelor's of arts degree in history from Columbia College, MO.

COL Brett Jenkinson is deputy commander, 1st Brigade, 82nd Airborne Division, Fort Bragg, NC. He has served four combat tours, including two to Iraq and two to Afghanistan (where he is currently deployed), and one peacekeeping tour in Egypt. He previously served as the light task force senior observer-controller, Fort Irwin, CA; light battalion commander, Fort Hood, TX, and Kunar Province, Afghanistan; National Intelligence Support Team chief, Bolling Air Force Base, DC; battalion S-3, Fort Bragg, NC, and Baghdad, Iraq; and battalion executive officer, Fort Bragg, NC, and Baghdad. His military schooling includes the Military Assistance Security Advisor Course, Fort Polk, LA; Joint Planning Course, Fort Leavenworth, KS; Command and General Staff Officers Course, Fort Leavenworth; Joint Firepower Control Course, Nellis Air Force Base, NV; Infantry Officer Basic and Advanced Courses, Fort Benning, GA; Airborne, Ranger and Jumpmaster schools, Fort Benning, GA; Air Assault School, Fort Campbell; Scout Platoon Leader Course, Fort Knox; Dynamics of International Terrorism Course, Hurlburt Field, FL; and Jungle Warfare School, Fort Sherman, Panama. He holds a bachelor's of science degree in civil engineering from the U.S. Military Academy, West Point, NY; and a master's of military arts and sciences degree in military history from the Command and General Staff College, Fort Leavenworth. He has been awarded

three Bronze Star Medals, one Purple Heart, one Defense Meritorious Service Medal, five Army Meritorious Service Medals, the North Atlantic Treaty Organization Meritorious Service Medal and three Army Commendation Medals for valor.

ACRONYM QUICK-SCAN

- BPT** – brigade patrol troop
- CFF** – call for fire
- CSM** – collection synchronization matrix
- FM** – field manual
- HBCT** – heavy brigade combat team
- HVT** – high-value target
- IED** – improvised explosive device
- IOT** – in order to
- IR** – incident report
- ISR** – intelligence, surveillance and reconnaissance
- IVO** – in vicinity of
- LoS** – line of sight
- NAI** – named area of interest
- NLT** – no later than
- NTC** – National Training Center
- OP** – observation post
- PCC** – pre-combat check
- PCI** – pre-combat inspection
- PID** – positive identification
- POI** – point of impact
- R&S** – reconnaissance and surveillance
- TF** – task force
- TLP** – troop-leading procedure
- TSE** – tactical support element

Breaking Up Is (Not So) Hard to do: Task-Organizing in the Combat Zone

by CPT Joel M. Johnson

You discover that the safety net of operating with your organic armor company is vanishing for the duration of your year-long deployment supporting American operations in a desert combat zone. Eight days into your first tour there, an infantry company sends your parent armor company a mechanized infantry platoon per your battalion's task organization. The change is not thrilling. You already serve as the tank-platoon leader in a mechanized infantry company. Now you are also the new M1A1 tank-platoon leader.

The initial meeting with the infantry-company commander and your new infantry-platoon leader counterparts goes well. You know you will be a good fit in your new company; however, the tankers in your platoon question how an infantry company commander will employ the platoon in the new area of operations. They trust that you and the platoon sergeant will voice concerns, from a tankers' perspective, over the capabilities and limitations of the M1A1 tank platoon.

Initially, you operate as a tank platoon. For the first few days, you work with the tankers you trained with during pre-de-

ployment. Soon your beloved tank platoon is further split into sections and task-organized. The taskorg forms either a combined platoon of armor and infantry or a cavalry platoon. A new cavalry platoon is formed when you and your wingman combine with Bravo Section of the mechanized-infantry company's 3rd Platoon. However, given your limited knowledge of the threat in the AO, as a young armor lieutenant you are not convinced that this is a change for the best. Your new platoon includes three sections: Alpha Section is you and your wing-tank; Bravo Section is your new platoon sergeant and his Bradley Fighting Vehicle; Charlie Section is two mounted infantry teams with one high-mobility multi-purpose wheeled vehicle each.

A few days of operating in a combat environment demonstrates that further division of your platoon into two sections is necessary. Each section will have one M1, one BFV and two HMMWVs with their infantry dismounts. You realize the taskorg change you initially thought a bad idea is actually the ideal configuration for operations in the contemporary urban en-

vironment. Even your tankers and infantrymen are beginning to gel as a cohesive unit and appreciate the capability each element brings to the fight in your platoon's AO.

At least, that's my experience. In 2004-2005, while leading my newly formed cavalry platoon in an insurgent-held suburb of Ramadi called Tameem, taskorg helped our success.

Deploying from Camp Casey, Republic of Korea, with 1st Battalion, 9th Infantry, from the 2nd Infantry Division's 2nd Brigade Combat Team, I was a green second lieutenant. I was still learning the responsibilities and capabilities of a tank-platoon leader. Just as described, I had to re-taskorg just a few days in-country. We trained at a Korea training center, emphasizing dismounted operations in urban terrain for the light infantrymen. We used the two armor companies primarily as overwatch elements during raids and outer cordons throughout the KTC's urban training facilities.

We conducted our drills for setting traffic-control points as a modified table of



organization and equipment M1A1 platoon and addressed crew-level room clearing. We easily overcame the challenge of quickly building a cohesive, combat-effective platoon while in combat. We trained all Soldiers, regardless of military occupational specialty, in common tasks, including how to conduct Battle Drill Six – the battle drill that addressed clearing buildings. Working from that common knowledge, we quickly set to work developing and refining our standard operating procedures as a combined platoon and became Green Platoon, Attack Company, 1-9 Infantry.

TCPs

Advantages to having all three elements of the cavalry platoon. Conducting TCPs for Green Platoon was a very efficient task due to our composition. The tanks provided excellent cover for dismounted Soldiers conducting the TCPs. They could carry up to 10 rolls of concertina wire, placed on extended racks fashioned from steel re-bar attached to the M1A1's exhaust grills for hasty employment.

Placing the BFVs in the TCP not only provided more cover to the dismounted Soldiers on the ground but also overwatch to the vehicle search operation. The gunners aboard the HMMWVs could provide overwatch as well. They remained near the searchers but positioned themselves outside the TCP's S-turns.

The configuration that best served Green Platoon placed one HMMWV at the exit side of the TCP. If a vehicle sped away or tried to bypass the TCP, the HMMWV acted as the chase vehicle. The cavalry-platoon configuration proved an invaluable task organization at the TCPs. It allowed flexibility, speed and survivability for all members of the platoon.

Considerations from a tactical and maintenance perspective. Wear and tear on the M1 and BFV can impede aggressive patrolling. Techniques such as creative patrolling, breaking predictive patterns and maintaining aggressiveness help minimize stress on the vehicles. They also allow the cavalry platoon to maintain the initiative in the AO.

As the platoon leader, I decided my platoon sergeant and I would lead most of our combat patrols in Tameem. During our nine-hour shifts, we conducted constant, aggressive patrols and retained initiative in the AO. Also, each Soldier developed knowledge and comfort with the terrain.

Alpha and Bravo sections alternated conducting the first patrol each day. To cover the entire AO took nearly an hour of patrolling. I always called my infantry squad leader to occupy the observation post with

his HMMWVs before my wingman and I proceeded. When we returned to our OP, I sent Bravo Section out to patrol a different part of the AO. Then, HMMWVs patrolled. This cycle repeated throughout the shift.

Our near-constant patrolling effected how we maintained our tracked vehicles and kept them operational. Even though Alpha and Bravo sections in the platoon knew every inch of the terrain in our team's sector, and therefore where we could maneuver tanks and BFVs, our aggressive patrolling was causing unexpected wear and tear on the vehicles. I cut down patrolling with Alpha and Bravo section so we could keep the M1s and BFVs on the road and operational.

Instead of the tracked vehicles, I began to send the HMMWVs out on patrols that wound through the side streets, the back alleys, and the nooks and crannies of Tameem. Those areas Alpha and Bravo section could neither access, nor stealthily navigate. Scaling back the tempo of patrols of Green Platoon's tracked-vehicle sections showed that I overlooked the capabilities of my platoon's HMMWVs.

Alpha and Bravo sections could not creep through the town at night to discover insurgents placing improvised explosive devices along roads as the infantry squad could. Nor could they quickly respond to search a house that raised suspicions while patrolling, as the HMMWV squad could. The locals, and indeed the insurgents operating inside of Tameem, adeptly dodged the observation of armored vehicles patrolling the streets, and they adjusted their tactics accordingly. Our HMMWVs, however, provided very little signature of their presence, and, as such, proved invaluable to Green Platoon's counterinsurgency operations in the Tameem AO.

It became apparent the platoon could not sustain the maintenance involved with non-stop M1/BFV patrols. In a typical day for Green Platoon, the two-tracked vehicle sections completed two patrols each, and the HMMWV squad patrolled the rest of the shift. To decrease the predictability of our patrols, I varied the sequence of the tracked vehicle sections' patrols each day.

One day, for example, I chose to conduct a patrol with my Alpha Section as soon as we had arrived in sector. My Bravo Section then conducted their patrols towards the end of the shift. The next day, I did not have any tracked vehicles rolling through Tameem until the middle of the shift. Instead, I chose to patrol the first half of the shift entirely with the HMMWV section. Other circumstances also influenced my mission plans from

time to time. For example, maintenance issues with a particular vehicle in the platoon, sniper insertions or raids we conducted routinely all influenced the way my day-to-day employment of the platoon.

Large-scale IEDs placed along main thoroughfares posed a heightened threat to our uparmored M1025 HMMWVs. Therefore, I chose to send them on aggressive patrols through the alleys and streets that were impassable to the tracked sections. I often gave my infantry squad leader detailed guidance for a specific patrol route through the town. During the patrol, the squad leader provided me with updates on his position as they conducted movement-to-contact. Constant reports from my HMMWV section leader, as well as diligently tracking the locations of each platoon section, reduced response time for sections to aid troops in contact. Also, he learned to articulate clearly the situation in the areas of interest throughout Team Attack's sector.

Choosing to have the HMMWV squad stick to side streets and alleys for most of their patrols greatly increased their survivability. Placing IEDs along smaller streets was more difficult for insurgents than laying them in medians and near trash heaps along main roads. Although the HMMWVs were still susceptible to rocket and rocket-propelled grenade attacks during patrols, they fared much better than tracked vehicles against IEDs in the streets and alleys of the more built-up and urban sections of Tameem.

Leader's role

As the leader of this M1/BFV and HMMWV infantry platoon, I frequently involved myself in our daily patrols. At that time, as an Armor Branch lieutenant, I was not as well versed in light-infantry operations as my infantry squad leader. As our time in-theater progressed, my adept infantry-platoon sergeant and my HMMWV section leader mentored me. Through their coaching, I involved myself more with the ground elements of my platoon as we conducted cordons and searches, dismounted operations and raids throughout Tameem.

Responsibility for the platoon ultimately rests on the platoon leader's shoulders. During raids aimed at capturing high-value targets and driven by up-to-the-minute intelligence, the platoon leader must be on the ground, helping identify targeted individuals, persons of interest and items related to priority intelligence requirements inside houses. In short, the platoon leader's role during these operations is with the elements on the ground with this cavalry task organization.

M1/BFV section advantages

The M1/BFV sections balance the M1 and the BFV's strengths and weaknesses to the highest degree, and provide a lethal combination of firepower and versatility. When the tracked-vehicle sections of the task-organized cavalry platoon conduct patrols, the tank in each section should lead so that it can take advantage of the greater max-elevation capability of the BFV's 25mm Bushmaster gun to scan rooftops and rearward, the way an M1 cannot.

The BFV, with its turret's ability to scan to the 6 o'clock position, can protect the vulnerable rear of the M1 while scanning for insurgents seeking to attack the section's rear. The M1 delivers maximum firepower to the front. When it is the lead vehicle, its frontal armor also has greater survivability than that of the BFV. In addition, the tank commander in the section can better determine whether he can pass through a narrow alley than his BFV wingman. So, the M1 in the lead prevents a tank maneuvering out of a narrow alley, or even falling into a ditch when a narrow embankment collapses under its treads.

A case in point is the night of Dec. 27, 2004, which Green Platoon will never forget. It was nearly midnight. My BFV wingman, scanning to my 6 o'clock position while occupying an OP, spotted suspicious activity 1 1/2 kilometers down one of the main roads. He quickly reported what he was observing, and in seconds, we were maneuvering toward the situation. As I called Bravo Section to quickly backfill our OP with the M1, I heard my wingman's 25mm gun destroy the overwatch elements of the insurgents' attempted ambush. While my wingman initiated direct fire with the insurgents, I arrived behind his position along the road.

I sent him forward to destroy insurgents moving through a field further to the south. My tank then conducted support-by-fire along the road, allowing him to destroy the enemy in the field. He then enveloped the main body of the ambush by moving inside of the apartment complex. Serving as the support-by-fire, my gunner and I fired every .50-caliber round I had loaded, 850 rounds of 7.62mm coaxial machine gun and a high explosive anti-tank round. (Of note, however: the HEAT round did not arm and detonate as I imagined it would. It affected only 75 meters from our tank, leaving merely a large hole at the base of the wall.)

As my wingman enveloped behind the ambushers inside the apartment complex, the M1 I called to our OP conducted a relief-in-place with me, and I followed the same route my wingman took. Once we enveloped the insurgents there, the attempted ambushers fled further into Tameem. A handful, though, remained to fight. We captured two, one trembling with an RPG in hand, and the other, hiding behind a wall, waiting to reload his friend's RPG.

The HMMWVs arrived as soon as the envelopment was complete. The infantrymen then conducted a thorough search of the site.

In those intense moments, the communication within Alpha Section, and across the platoon, led to its success. The versatility of the M1/BFV section allowed Green Platoon to defeat the potentially devastating insurgent ambush on Alpha Section as it traveled into the kill zone. In addition, the HMMWV section's rapid response and the platoon sergeant's ability to direct it effectively while the leader engaged with Alpha Section also helped Green Platoon's success in this particular confrontation.

Professional development

During our deployment, each member of the combined-arms platoon developed professionally due to our operating under the cavalry taskorg. For example, my gunner developed skills as a tank commander when he filled in while I was on the ground with my HMMWV section. I eventually gained confidence in his abilities and sent him to command the Bravo Section M1 while its commander was on leave.

Each man was vital to operating full combat vehicle crews and dismounted teams due to present strain on operating within the platoon. I regularly had an 11B serving as the loader of my M1. I frequently gave Green Platoon's 11Bs the chance to practice loading rounds inside the M1 turret and even fire the main gun. Likewise, the platoon sergeant and I ensured that the 19Ks were adept with working aboard the BFVs and were familiar with their 25mm gun and turret. As such, my tankers would conduct patrols, at times for a few days in a row, with the HMMWV section, even raiding houses as part of their dismounted teams. Camaraderie formed within Green Platoon when each Soldier, whether 11B or 19K,

learned to appreciate the capabilities each brought to the urban terrain fight.

Effectiveness of the cavalry platoon

The combined-arms platoon, employed in an urban environment, is the most effective taskorg available, if such a configuration within the company/team is possible. Green Platoon, while conducting combat patrols throughout Ramadi from August 2004 to August 2005, was a testament to this. Combining the speed, devastating firepower, survivability and intimidation of the M1A1; the agility, versatility, and lethality of the BFV; and the more personal, responsive and effectual aspects of the HMMWV section, the task-organized cavalry platoon is the ideal combination of armor and infantry – working together to accomplish every task put before them in a contemporary, urban environment.



CPT Joel Johnson is a student (foreign-area officer in training) in the Basic Thai Language Course, Defense Language Institute, Monterey, CA. He has also served as rear-detachment commander, operations (S-3) officer, S-1 officer and Headquarters and Headquarters Troop commander, all in 5-1 Cavalry, Fort Wainwright, AK. His military education also includes the Cavalry Leaders' Course, Airborne School, Armor Captains' Career Course and Armor Officer Basic Course. He holds a bachelor's of arts degree in political science from The Citadel.

ACRONYM QUICK-SCAN

- AO** – area of operations
- BFV** – Bradley Fighting Vehicle
- HEAT** – high explosive anti-tank
- HMMWV** – high-mobility multipurpose wheeled vehicle
- IED** – improvised explosive device
- KTC** – Korea training center
- OP** – observation post
- RPG** – rocket-propelled grenade
- Taskorg** – task organization
- TCP** – traffic control point



Intellectualism and Military Innovation

by LTC Charles W. Morrison

In a letter to his friend and fellow intellectual, B.H. Liddell Hart, T.E. Lawrence wrote these words in 1933: “If your book could persuade some of our new soldiers to read and mark and learn things outside drill manuals and tactical diagrams, it would do a good work. I feel a fundamental, crippling incuriousness about our officers. Too much body and too little head.”¹ Lawrence was concerned about the British army’s lack of intellectual thought and debate in the interwar period, and how it would affect the Army’s fighting prowess for the next conflict.

For the American army, there’s a lesson, too: military organizations that promote intellectual debate focus on educating their officers in a professional environment. They learn from the experience of those who develop tactics, techniques and procedures in combat, and they innovate more effectively than organizations who do not develop these TTP.

German example

Armored-warfare innovation during the interwar period was most successful under the German military despite the severe budgetary, manning and equipping restrictions placed on it by the Versailles Treaty and the global economy. The German military had long established itself as an organization that tolerated and highly encouraged intellectual debate among its officer corps. This method and tolerance dated to Prussian Field Marshal Count Helmuth Karl Bernhard von Moltke, who led German forces in the mid- to late-19th Century.

As military historian Gunther E. Rothenberg points out, Field Marshal Moltke believed that “[i]n war, as in art, exist no general rules; in neither can talent be replaced by precept.”² Field Marshal Moltke had mentored and developed several of the General Staff who fought World War I and then in turn survived to lead Germany through the interwar period. Count Moltke had been the first to pro-

mote the decentralized decision-making process that placed much more responsibility on the junior officer at the tactical level.³ This trademark of German military leadership had first shown itself in the late days of World War I and had been placed into postwar doctrine in the early 1920s.

With the selection of GEN Hans von Seeckt as the first post-World War I German chief of the General Staff, the German army continued its tradition by establishing an officer corps that “emphasized intellectual as well as tactical” excellence.⁴ This led to a high tolerance of officers like Hans Guederin, who challenged conventional doctrine and was permitted to conduct exercises that advanced theories on armored warfare and, most specifically, the development of blitzkrieg or “lightning war.” Even though GEN von Seeckt and other German generals may have disagreed with Guederin and other junior officers, they ensured their findings and thoughts were published throughout the officer corps for intellectual debate and innovation.⁵

The German army also maintained a highly competitive and challenging professional-education program that encouraged intellectual debate as well as learning from former allies and adversaries alike. They learned the lessons of World War I as well as new lessons from training exercises that tested technological advances in equipment that was unavailable to the Germans. In the aftermath of World War I, the Germans took more than 400 officers and formed several committees led by general-staff officers to research the lessons of the conflict and try implementing them into the new German army’s doctrine. What resulted in 1921 and 1923 was Army Regulation 487 entitled *Leadership and Battle with Combined Arms*.

The five tenets of the new doctrine were 1) maneuver; 2) an offensive mindset; 3) decentralized operations at the lowest level possible; 4) officers and noncommissioned officers to use their judgment on the battlefield; and 5) combat leaders to display initiative at all times. It was an incredible document that combined traditions long embedded with the German military but also incorporated some of the most important lessons of World War I—that of maneuver and decentralized execution.⁶

For admittance to the German staff college, officers had to sit through four days of exams and, once having completed the course, only the top graduates received General Staff status. This coveted status meant that the top graduates of the staff college would have their assignments controlled by the German army’s General

Staff. This enabled these officers to not be abused or targeted by a group or individual for limiting their career options. This produced a highly competitive and competent officer corps for the German army before World War II.⁷

Lastly, despite the lack of modern tanks and other equipment banned by the Treaty of Versailles, the Germans read and observed the exercises of other nations with great interest and intellectual analysis. This enabled them to stage their own maneuvers with substitutes, where they tested innovative maneuver theories that had been developed only through the process of intellectual reading and analysis. A German report on the British Maneuvers of 1926 posited that armored vehicles’ increase in speed might enable them to be used independently of light infantry and possibly be paired with motorized infantry and artillery for a more potent maneuver force on the modern battlefield.⁸

U.S. Navy examples

The U.S. Navy’s innovation with aircraft carriers during the interwar period is another example of innovative thinking and analysis producing significant results in military innovation. First, the Navy established a Bureau of Aeronautics within the Department of the Navy that provided a powerful political advocate for resourcing innovation in aircraft-carrier design and development. In addition to acquiring funding, the bureau also focused on the initial design, construction and development of doctrine for “aerial warfare at sea.”

The new bureau was a strong and effective advocate for innovation in airpower at sea, from Navy leadership all the way up to the President.⁹ The popular and extremely competent ADM William Moffet was the new bureau. With ADM Moffett providing the resources and ability for liberal innovation despite the objections of naval leaders more resistant to change, professional education was also influencing the ability of the naval-aviation community to enhance and continue the transformational process.

Second, Navy CAPT Joseph Reeves—who had attended the Naval War College in 1923, where he participated in innovative wargames that used naval-aviation assets—used lessons-learned from these wargames in his next assignment as commander, Aircraft Squadrons, Battle Force. He focused on reducing launch and recovery times for aircraft on the USS Langley, the Navy’s only aircraft carrier at the time. Reeves dramatically increased the aircraft carrier’s ability to project combat power into the air. His results were fed back to the war college for more wargam-

ing while simultaneously also given to the Bureau of Aeronautics for more proof of the aircraft carrier’s capabilities.¹⁰

CAPT Reeves, the Bureau of Aeronautics and the Naval War College are examples of how the promotion of intellectual thought and an innovative professional-education system can rapidly transform military organizations effectively. The Navy’s leadership, both military and civilian, used results produced from intellectual analysis of new technology and the lessons learned from World War I to cultivate political support for resourcing the acquisition of aircraft carriers for the United States that proved crucial during World War II in the Pacific Theater.

Army-Marines examples

Almost a century after the interwar period, the U.S. Army and U.S. Marine Corps developed a new counterinsurgency doctrine by encouraging the intellectual exchange of ideas from the tactical level to the Pentagon level. As early as 2004, with the development of an insurgency in Iraq and the resurgence of the Taliban in Afghanistan, leaders at the tactical level were sharing and publishing information that would lead to one of the fastest and most complete rewrites of military doctrine in the history of warfare.

With the advent of the Internet and access to it in an active combat zone, collaborative Websites such as companycommand.com led to sharing TTP. This was previously unheard of as an intellectual way to share ideas on how to fight a current war. Company commanders, platoon leaders and other tactical leaders were learning how to fight an insurgency by trial and error but were collecting this information and passing it on in an informal way up until 2006.

CAPT Travis Partriquin, an innovative staff officer in Iraq in 2006, was able to change the way his entire brigade conducted operations by using a simple Powerpoint presentation that described two things: how effective personal relationships with tribal leaders were, and how valuable developing human intelligence through boots-on-the-ground patrolling was. When Secretary of Defense Robert Gates was speaking to the ranking military leadership in Fall 2007, he used CPT Partriquin’s presentation to demonstrate how innovative thinking at the tactical level had initiated the start of the successful “Awakening” in the troubled Anbar province of Iraq.¹¹

In late Fall 2005, an intellectually driven regimental commander, COL H.R. McMaster, achieved great success in Anbar in and around the city of Tal Afar. His unit effectively used the “clear, hold, build”

strategy to stabilize the area and set an example for future units operating in Iraq. McMaster had written a book on Vietnam and studied the Iraq conflict intensively prior to his deployment.¹² Here again was another example of intellectual analysis driving innovation.

(Editor's note: BG McMaster has been selected as the next Maneuver Center of Excellence commander, replacing MG Robert Brown.)

In October 2005, LTG David Petraeus assembled a team of academics, civilian experts and military veterans of the current conflict to rewrite doctrine reflecting what history, sociology, anthropology and tactical experts on the ground fighting in the conflicts (now classified as COINs) had learned. LTC John Nagel played a key role in this process. A graduate of West Point and a Rhodes scholar, Nagel had written his doctoral thesis on military organizational change in the midst of a COIN. He compared the Malayan Emergency of the 1950s British army to that of the U.S. Army's experience in Vietnam a decade later. Nagel described the experience of writing the new field manual as an academic endeavor. The description showed there was a free exchange of ideas and serious debate on what worked in the past and what works now on the battlefields of Iraq and Afghanistan.¹³

The U.S. Army fundamentally changed its COIN doctrine in two years while simultaneously conducting ongoing military operations. This feat was achieved by embracing on-line collaborative sites where tactical leaders could share their best practices as well as endeavoring to rewrite outdated doctrine with the help of civilian and qualified military intellectuals who searched history for the right lessons to be learned and applied towards successful COIN efforts.

Summary

Military organizations that value intellectual debate and learn from prior experiences on the battlefield will innovate and transform more effectively than those who do not. The Germans captured their experiences from World War I and ana-

lyzed them effectively. They kept proven practices like decentralized execution but adapted to accept new ideas when it came to maneuver and the rapid advances in armored and motorized warfare.

The United States built an air naval power that contributed greatly to its success against the Japanese in World War II due to its tolerance of discussion and wargaming within its professional-education program at its most senior service college. This resulted in an established and modern aircraft-carrier fleet by the time of Pearl Harbor in December 1941.

Lastly, the U.S. Army and Marine Corps used the modern Internet as a free exchange of ideas while intellectually driven leaders transformed COIN doctrine in as little as two years while the fight was still going on in. Transformation can be more effective and rapid if those involved will study and analyze their past, the likely enemy of the future and the latest technology when determining the organization, doctrine and training of its forces.



LTC Charles W. Morrison is the executive officer to the adjutant general, North Carolina Guard, Joint Force Headquarters-North Carolina, Raleigh, NC. He previously served as XO, 1st Combat Aviation Brigade, 120th Infantry, 30th Heavy Brigade Combat Team, Forward Operating Base Mahmudiyah, Iraq; XO, Recruiting and Retention Command, North Carolina National Guard, Raleigh; and commander, Company C, 1st Battalion, 109th Infantry, Operation Iraqi Freedom, Iraq. In fact, he served twice with 30th HBCT, which was the only National Guard BCT to conduct two full-spectrum operations deployments to Iraq in 2004 and 2009. His military education includes the Infantry Captain's Career Course, where he was on the commandant's list, and Intermediate-Level Education. LTC Morrison holds a bachelor's of arts degree in history from the University of North Carolina at Asheville and a master's of arts degree in military studies (American Civil War) from American Military University.

Notes

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¹¹ Jaffe, Greg, "Mid-Level Officers Show Enterprise Helping U.S. Reduce Violence in Iraq," *Wall Street Journal*, Dec. 29, 2007.

¹² *The U.S. Army-Marine Corps Counterinsurgency Field Manual*, Chicago: University of Chicago Press, 2007.

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ACRONYM QUICK-SCAN

BCT – brigade combat team
COIN – counterinsurgency
HBCT – heavy brigade combat team
TTP – tactics, techniques and procedures
XO – executive officer

Electronic-Warfare Opportunities at NTC

by SFC Jason N. Culver



The conflicts in both Afghanistan and Iraq have led to one of the most innovative and resourceful methods-of-warfare periods for not only the U.S. Army but also for our adversaries. In fact, after operations began in Iraq, coalition forces found themselves fighting in an environment characterized by uncertainty and an evolving enemy. Insurgents soon realized they could not compete with coalition forces head-to-head and developed new techniques to inflict casualties. One of the deadliest techniques was the radio-controlled improvised explosive device.

The Defense Department realized it needed to understand and monitor the electromagnetic spectrum, starting with integration of Navy electronic-warfare officers within Army ground units in 2006 to assist in defeating RCIED. Seeing the benefits of operating in the electromagnetic spectrum, the Army expanded its own capabilities in 2009 by establishing the 29-series (EW) career field.

However, more than a year after establishing the 29-series field, units rotating through the National Training Center at Fort Irwin, CA, seldom possessed a 29E (enlisted EW specialist) to fill the battalion-level EWO position. (The brigade EWO position is filled with either a 290A (EW warrant officer) or an officer with the 1J additional skill identifier.)

If the battalion-level EWO position is filled, due to ongoing implementation of the 29E and the EW specialist's continuously expanding capabilities, some units don't fully understand this Soldier's capabilities and often underuse his or her capabilities. Combat trainers at the NTC work diligently to assist battalion-

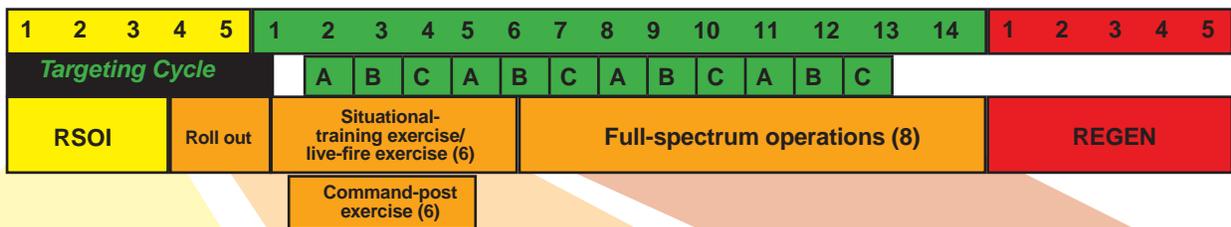
level leaders to fully understand and integrate the EWO into all functions across the spectrum of operations.

To address these concerns, this article elaborates to maneuver commanders the benefits of having a 29E involved in mission planning and execution.

Maximizing EW

Field Manual 3-36, *Electronic Warfare in Operations*, is the current doctrine specifying the EWO's capabilities, responsibilities and duties. This manual provides a good foundation for commanders at all echelons to understand what the EWO can bring to the fight. In the contemporary environment, the EWO brings much more to the table than counter-RCIED EW, or CREW, device-tracking and maintenance; FM 3-36 also states that the role of Army EW operations is to provide the land-force commander with capabilities to support full-spectrum operations.

Commanders must fully integrate EW capabilities and apply them across the elements of combat power. At NTC, combat trainers assist the EWO and commanders by demonstrating "what right looks like." To do this, combat trainers often coach EWOs to be confident in the knowledge they possess. Combat trainers recommend that the EWO work hand-in-hand with both the Fires Cell and the S-2 to understand the targeting methodology and the intelligence-preparation-of-the-battlefield process. Once EWOs understand their environment, they may confidently approach their leadership with recommendations



<p>Reception, staging, onward movement and integration training</p> <ul style="list-style-type: none"> ☑ Electronic warfare for Signal officers, advanced echelon pre-RSOI ☑ EW Warrant Officer Course (RSOI 1-4) ☑ Counter-RCIED EW classes (RSOI 1-4) ☑ Joint tactical air controller EW brief (RSOI 2) ☑ EW/intelligence, surveillance and reconnaissance class (RSOI 3) 	<p>Situational-training exercise/command-post exercise</p> <ul style="list-style-type: none"> ☑ Battalion/brigade combat team EWOs develop electronic attack target packets in accordance with theater standard ☑ Battalion EWOs load/manage CREW ☑ BCT and battalion EWOs can conduct live EA ops ☑ JTAC EW brief (RSOI 2) ☑ EWOs can request EW targeting data 	<p>Full-spectrum operations training</p> <ul style="list-style-type: none"> ☑ Constructive EA in support of Training Day 9 named operation ☑ Live EA sortie in support of TD12 named operation ☑ Constructive EA aircraft; EWO communication via JABBER ☑ Constructive EA effects in support of immediate requests ☑ ~20 RCIEDs emplaced to stress CREW employment ☑ Two CREW load-set changes to meet emerging insurgent trends
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Figure 1. Examples of EW training at NTC throughout the lifecycle of a mission-rehearsal-exercise rotation.

and demonstrate their ability to execute the commander's intent.

EW capabilities support all six warfighting functions. A few examples of support include target designation and range finding; denial of enemy information systems; use of the electromagnetic spectrum to counter IED operations; intelligence-collection capabilities; capabilities to search for, intercept, identify and locate sources of radiated energy; spectrum deconfliction; increased situational understanding and common operational picture development; and deception of enemy forces. Combat trainers assist the EWO and staff by creating situations that facilitate the full integration of the EWO into all staff functions – from commander update briefings, requesting electronic-attack assets, implementing EW capabilities and responsibilities during the targeting cycle, and participation in the military decision-making process throughout the unit's rotation.

Training EW

NTC has the unique capability to replicate conditions found in both theaters of combat. Also, NTC provides a rare training environment where EW specialists can request, receive and integrate "live" EA assets from 55th Electronic Combat Group (EC-130 Compass Call). NTC also replicates assets constructively by using both digital and frequency-modulation platforms. Because these assets are available real-time, the EWO is able to complete a thorough mission analysis and provide accurate data to the asset used.

During a mission's execution, the EWO is the conduit of information from the EA and electronic-support assets to the ground commander. Usually placed directly within the patrol, or stationary inside the current operations cell of the main command post, the EWO provides critical information to and from both the asset and ground commander, ensuring coordination and synchronization of electronic attack.

Whether constructive or live, the EWO is able to exercise jamming control authority, provide situational awareness and understanding to the commander and assist ground units in successfully executing missions. From his or her position, the EWO is able to modify actions, resolve issues within the electromagnetic spectrum and respond to the dynamics of the mission.

Combat training centers have historically been the 29E's first operational experience within the staff, and at the NTC, this experience is very realistic. Combat trainers assist the EWO by reinforcing what they have already learned in school by conducting refresher training during the reception, staging, onward-movement and integration week, followed by one-on-one training for the rest of the rotation.

Combat trainers provide doctrinal references and instruction, assist EWOs with concept-of-operations development and demonstrate the correct methods of requesting, controlling and integrating assets. Also, combat trainers advise the staff on how to integrate the EWO into all warfighting functions. Once the rotation concludes, the 29E has experienced how to integrate his or her capabilities into the unit, built confidence in his or her abilities and demonstrated to the unit what the EWO can bring to the fight.

Trainers on every team

The Army Electronic Warfare Branch is still a growing capability; admittedly, integration is a steep learning process for all staffs at each echelon. The Army's EW proponent is therefore working with NTC to develop commanders' understanding and integration of EW into full-spectrum operations. As units receive their 29Es and rotate through CTCs such as NTC, commanders have the opportunity to cultivate an appreciation for what the EWO brings to the fight. At NTC, combat trainers are

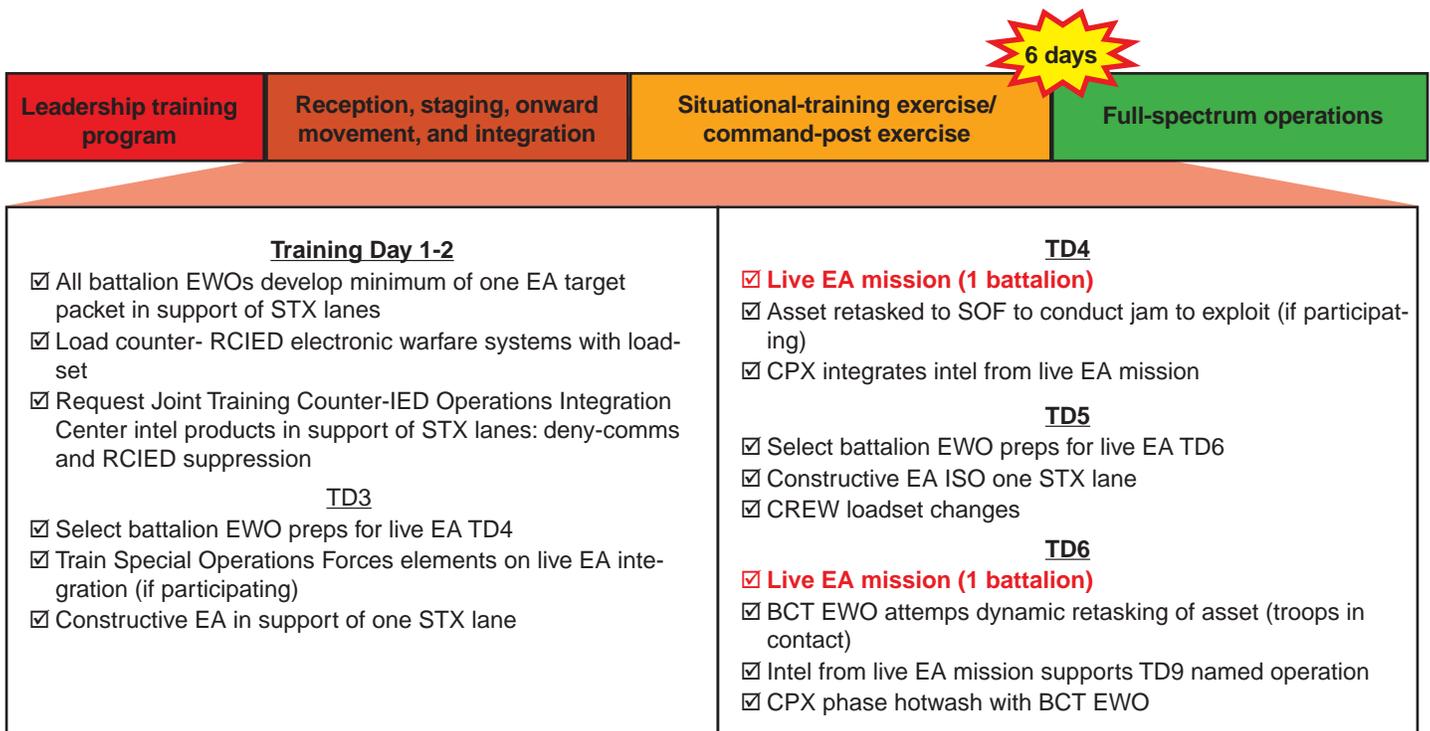


Figure 2. Examples of EW-focused potential training opportunities during the situational-training exercise/command-post exercise phase of a rotation.

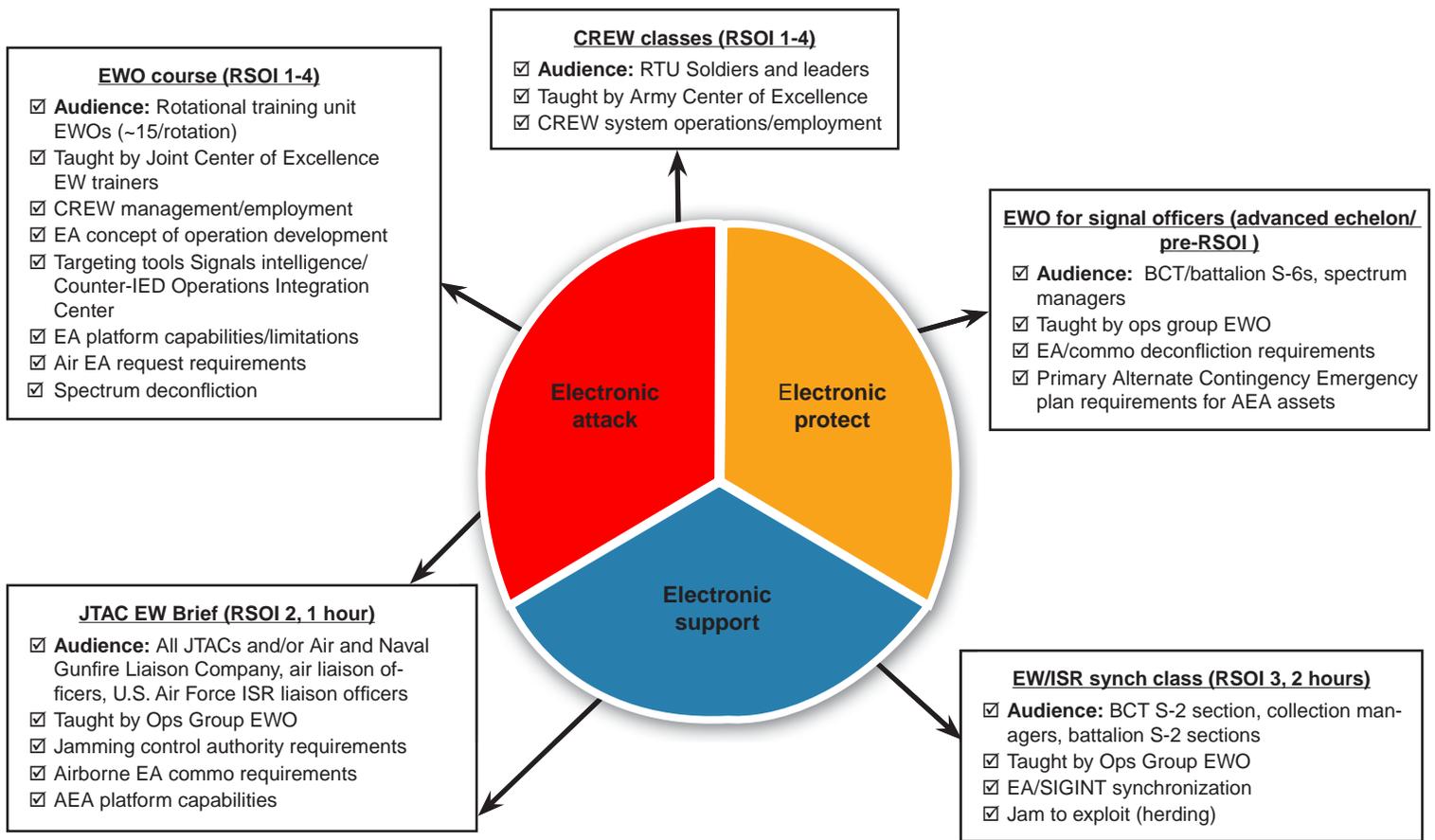


Figure 3. Examples of EW-focused RSOI training opportunities at NTC for MRE rotations.

committed to assisting units with EW training and integration; through aggressive use of mobile training teams, the NTC has trained some 1J ASI and practiced combat with them.

In many respects, combat trainers are at the forward line of troops in assisting the Army with the implementation process and by providing the new 29E with valuable experience and knowledge, allowing for immediate use in either of the combatant theaters. More information about EW may be found from the EW proponent Website at <https://combinedarmscenter.army.mil/pages/2/electronicwarfareproponent.aspx>.



SFC Jason Culver is a 13F fire-support combat trainer on the Operations Group's Cobra Team at NTC. He is a recent graduate of the operational EW, battle staff, Joint firepower control and collateral-damage-estimation courses. He is deployed to Afghanistan as part of the Worldwide Individual Augmentee System and, pending command approval, will return to NTC to clear and proceed to Warrant Officer Candidate School – then to Fort Sill, OK, to become a 290A EW technician.

ACRONYM QUICK-SCAN

AEA – airborne electronic attack
ASI – additional skill identifier
BCT – brigade combat team
CTC – combat training center
CONOP – concept of operations
CPX – command-post exercise
CREW – counter radio-controlled improvised explosive device electronic warfare
EA – electronic attack
EW – electronic warfare
EWO – electronic-warfare officer
FM – field manual
IED – improvised explosive device

ISR – intelligence, surveillance and reconnaissance
JTAC – Joint tactical air controller
MRE – mission-rehearsal exercise
NTC – National Training Center
RCIED – radio-controlled improvised explosive device
RSOI – reception, staging, onward movement and integration
RTU – rotational training unit
SIGINT – signals intelligence
SOF – Special Operations Forces
STX – situational-training exercise
TD – training day

hybrid threats of the future. In our Armor School vision statement, I discussed the attributes of professional Armor warriors as:

- Skilled in the art of mounted warfare
- Adept at boldly developing the situation through action
- Mentally and physically resilient
- Intellectually capable of leading decisively under conditions of ambiguity
- Prepared to relentlessly close with and destroy the enemy with fire and maneuver as part of a combined-arms team

In this column, I emphasize the last bullet and the need for Armor leaders to train our formations to be precision-gunnery experts as we face hybrid threats in future environments. Precision-gunnery expertise is a skill we must have to enable maneuver to a position of advantage over an enemy with standoff weapons capability.

Our gunnery manual, Field Manual 3-20.12, outlines combined-arms training strategies for all weapon platforms, incorporating simulation in gunnery to develop a higher level of gunnery proficiency. It lays out the requirements for armored crews to have a thorough knowledge of the functional capabilities of their plat-

form's weapons systems, the techniques of combat identification and effective use of all crew-served weapons.

The Armor School is highlighting the importance of precision gunnery by hosting the first Sullivan Cup Competition this May. This competition will allow our armored warriors the opportunity to demonstrate their professional expertise as a lethal tank crew and will determine the best tank crew in the U.S. Army. The 2012 Sullivan Cup will demonstrate the importance of precision gunnery through a realistic and challenging tank-crew competition that recognizes the Army's top crew. It further familiarizes participants on techniques to train crews in both the live and virtual domains to improve crew drills and enhances precision-gunnery skills.

Critical to a unit's success in gunnery is having the right leaders properly trained. Over the last decade of conflict we have been fighting on various weapon platforms and have lost some of our precision-gunnery edge. We now have Armor leaders in our ranks who have not participated in Table VI (basic crew qualification) and/or Table XII (platoon qualification), nor have they participated in a tank crew precision-gunnery competition. Therefore it is critical we continue to emphasize the importance of gunnery training and the value of the unit master gunner. We have

found that a school-trained unit master gunner is essential to the unit's gunnery expertise and the integration of fires. The Master Gunner Course is still one of the most challenging schools in U.S. Army Training and Doctrine Command, and the payoff of getting one of your leaders back to the unit after receiving this critical training is enormous. As we prepare for hybrid threats of the future, the role of the unit master gunner is even more critical for both training and fires integration of the combined-arms team. Ensure you are sending your very best!

In closing, future operating environments will place unique challenges on our combined-arms teams. Engaged leaders who understand the operating environment, the importance of combined-arms training, the application of precise direct fire and building a team of highly qualified gunnery experts will carry the day. I know you are all up to the challenge!

Forge the Thunderbolt!



The Sullivan Cup 2012

Best Tank Crew in the Army



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Forge the Thunderbolt!

The Sullivan Cup is the U.S. Army Armor School's premiere tank crew gunnery competition. Held annually, the competition draws tank crews from across the Army to test their precision gunnery skills for a chance to be named best of the best.

10 Crews... 4 Days... Only 1 Can Win

LETTERS

Paradigm shift? Nope

Dear **ARMOR**,

MG Robert Brown intrigued me with his submission of the first of a three-part article series addressing squad-level training and leader development ("9 as 1: Small-Unit Leader Development – A Paradigm Shift," **ARMOR**, November – December 2011 Issue). I agree with MG Brown that the squad is where the Army needs to prioritize, but unfortunately, as I read the article, only the title stood out as intriguing.

A paradigm shift is loosely defined as a conceptual change in what is generally accepted by most people in an intellectual community for solving complex problems. In this article, the author is announcing that a change is needed in how we train and develop small-unit leaders, particularly at the squad level. He does not explain the current paradigm, only that a shift is required. What is the current conventional wisdom in developing the perfect rifle squad? This remains unexplained; therefore, a "shift" may not necessarily be required.

The author tells us that the basics of shoot, move and communicate remain the foundation for guiding how we train and evaluate a squad, but that "rote-repetition approach of settling an engagement" is not appropriate any longer in today's environment. I believe that this statement requires further explanation: how else can a small unit such as a squad or platoon settle an engagement? "Maneuver" itself is a simple concept of fixing the enemy in place so as to move another element into a position of advantage. The enemy then has the choice: leaving its position; fight (and die) in place, or surrender. Is there a shift from this paradigm? The author implies that there is but does not state why today's environment requires a shift. It is arguable whether today's operational environment creates the so-called "strategic squad" in a way different from that presented to a low-ranking Roman soldier in 66 A.D. on the eve of the Jewish War or prior to the German uprising on the Rhine River. History is rife with mistakes made by low-ranking Soldiers that explode with strategic implications, often because senior leaders discounted them in the first place. Twitter and Facebook have not changed this concept; we are merely slower than our adversary in learning how to take advantage of the rules of the game. National Football League rules protecting receivers change the passing game; they do not, however, fundamentally change how we develop and drill cornerbacks.

History continues to demonstrate that the more we believe things change in warfare, the more they surprisingly stay the same. As Vegetius pleaded with Emperor Valentinian II for the Roman army to re-

turn to its roots in how it recruited, trained and developed leaders, and in how it operated, perhaps it's time for the U.S. Army to realize that in its basic form, training Soldiers and developing leaders has not really changed. Training avatars that mirror World of Warcraft or Skyrim (and yes, I play those games) may not return adequately on the investment. A better return is less turbulence in noncommissioned officer assignments by Human Resources Command. A restrictive and selective NCO process; time dedicated to training; multiple in-the-field repetitions on fire and movement; multiple repetitions in interacting with actors that do not speak English: these are the basic guarantees that our battalion and company commanders need. The alternative is what we see today: teams that constantly change personnel month to month; training schedules where subjects fluxuate in priority week to week and where companies are lucky to have solid, energetic staff sergeants as squad leaders.

Finally, I sincerely appreciate the author's encouragement on dialogue for change; reviewing programs of instruction, developing leaders more effectively, etc. However, besides the interesting concept of an "individual training avatar," everything in the article remained noticeably banal while glossing over the hard implication that apparently the Noncommissioned Officer Education System is not turning out morally grounded, ethically guided, adaptive and enthusiastic, trained and competent NCOs. The same, of course, might be said for the Captain's Career Course and Intermediate Level Education. After all, if they were, then a paradigm shift would not be necessary.

I believe that we need to define the problem set better. Is it training and if so, is it the fact that the same nine-man squad that completed one squad live-fire exercise (Battle Drill 6, of course) in May now deploys to the National Training Center in September with three different team members and executes as part of a company LFX ... and will likely deploy to Afghanistan with even more turmoil? Is it leader education? Or is it because leaders today are perceived to lack a moral and ethical compass (some unit chaplains are nodding their heads)? Is it all of them?

CHRIS L. CONNOLLY
LTC, U.S. Army

Just a platitude

Dear **ARMOR**,

After reading the second of a three-part series of articles by MG Robert B. Brown ("9 as 1: Building Teams and Strengthening Soldier Resilience and Unit Performance," January-March 2012 edition), I clearly see that the effort will be pronounced successful, regardless of its merit, if any.

Comprehensive Soldier Fitness – Performance Resiliency Enhancement Program, or CSF-PREP, will be added to the Army's lexicon for awhile until the next best thing comes along.

Why such cynicism?

First and most obviously, when the Maneuver Center commander himself is the author and proponent, feedback and comments will be favorable and supportive. No one of importance, especially his own staff, will point out glaring flaws.

(For a historical comparison, I suggest readers review the history of LTG Leslie McNair, commander of Army Ground Forces and the establishment of the tank destroyer force early in World War II.)

Second, the supposedly successful "proof of principle" case study was of individual Army Physical Fitness Test scores and individual weapons qualification scores at one-station unit training. Excuse me, but both of those are individual proficiency scores grouped collectively. They are not squad results. While I fully accept that certain changes in motivational training by drill sergeants might have generated positive results in training, claiming this as proof that CSF-PREP makes for better squads is absurd since that was neither trained nor evaluated.

MG Brown ends: "Educating and training squads collectively in a tailored, relevant mental-skills package may have the synergistic effect of creating a more mature, elite and cohesive squad mindset – an essential combat enabler for achieving excellence and winning tip-of-the-spear, lethal and nonlethal actions of the 21st Century." This is a wonderful-sounding statement of the obvious, but where is the squad leader in this? Is he the empowered and inspirational leader-trainer as suggested in the article, or rather one of the collectively-trained squad members as occurs in the supposed "proof of principle" where drill instructors conduct the training?

Like all pop culture innovative New Age and business school success platitude-filled fads, there are plenty of good buzz words and laundry lists of check-the-block steps to achieving nirvana, but it is quite clear that the Maneuver Center of Excellence is simply stringing together a bundle of mixed metaphors. Far more gestational thought is required.

Forge the Thunderbolt!

CHESTER A. KOJRO
LTC, Armor,
U.S. Army Reserve, retired

REVIEWS

Shadow of the Sultan's Realm: The Destruction of the Ottoman Empire and the Creation of the Modern Middle East by Daniel Allen Butler, Potomac Books, Washington, DC, 2010.

From the remnants of the Byzantine Empire arose the Ottomans, an empire that extended from North Africa, Asia Minor, the Middle East and the Balkans. Many areas of interest to the United States today were former Ottoman dominions like Egypt, Iraq, Syria, even Libya. Understanding the mechanics of this former empire is crucial to comprehending the nuances of the region. Understanding North Atlantic Treaty Organization-member Turkey also requires an appreciation for Ottoman history.

Daniel Allen Butler has written several non-fiction books on the history of the Titanic and the British experience fighting the so-called Mahdi in the Sudan. His latest book looks at the fall of the Ottoman Empire – and from that fall, the creation of the modern Middle East.

Butler's book opens with introducing various Turkish reformers, each with their own distinct ideas on how to address Ottoman decline. Midhat Pasha promulgated a constitution modeled vaguely on the British constitutional monarchy in 1876. However, the dressings of constitutionalism without practicing democracy turned many Ottoman subjects to

view Ottoman constitutionalism as an expedient to make the Turks more acceptable to Western powers. As one of these "dressings," Sultan Abdul-Hamid II refused to relinquish his powers, so organized opposition to him began in 1889. Critics of the sultan included Ahmed Riza, who advocated curbing the sultan's power and returning to the framework of the Midhat Constitution, with an added parliamentary structure. Sabbahedin Bey wanted an advisory council to the sultan modeled on a Western-style cabinet, with less centralization to attract foreign investment. Bey hoped the investment would lead to modernization of Ottoman infrastructure, enabling the empire to join other great powers. Military-school cadets wanted a revolution, any revolution, to agitate for change.

To pacify the Balkans, the sultan posted larger garrisons like Third Army Corps in Macedonia. It was the officers of this corps who would be spark the Young Turks movement. These officers included the violent MAJ Ahmed Niyazi, who led 200 soldiers in a march on Istanbul, demanding a restoration of the 1877 constitution; and MAJ Ismail Enver Bey, who would rise to become one of three leaders who would govern the Ottoman Empire in World War I with disastrous results.

Butler's book also discusses the incompetent strategy of Enver Pasha and his failed military adventure along the Turkish-Russian frontier, and Djemal Pasha's failure in attempting to take the Suez Canal. The British

would suffer the surrender of an entire British Army in Kut, Iraq, under the generalship of Ottoman GEN Nurriddene Pasha, in a classic case of overreach and conflicting policies from London, the British high commissioner in Egypt and the British viceroy in India.

The book includes Germany's attempts to incite jihad against the French, British and Russians. The Germans conducted an elaborate campaign of propaganda that was successful even three decades later, as employed by the Nazis in World War II. Among the German-Ottoman propaganda successes was enticing the Afghan king to start what would be the Third Anglo-Afghan War in 1919.

Readers will meet Kemal Ataturk and see his generalship in Gallipoli that rescued the Ottoman capital from British capture. Ataturk transformed his brilliance on the battlefield into political capital. Mustafa Kemal (Ataturk) gradually emphasized preserving Turkey (Asia Minor) and not the Ottoman Empire; in 1923, he created the Republic of Turkey and, a year later, deposed the last Ottoman sultan.

Read this book to get the details of how the end of Ottoman Empire came about.

YOUSSEF ABOUL-ENEIN
CDR, U.S. Navy

ARMOR to Continue to Print

Good news – the Armor School commandant has given the thumbs up to negotiate a new print contract to begin when our current one ends Feb. 28, 2013.

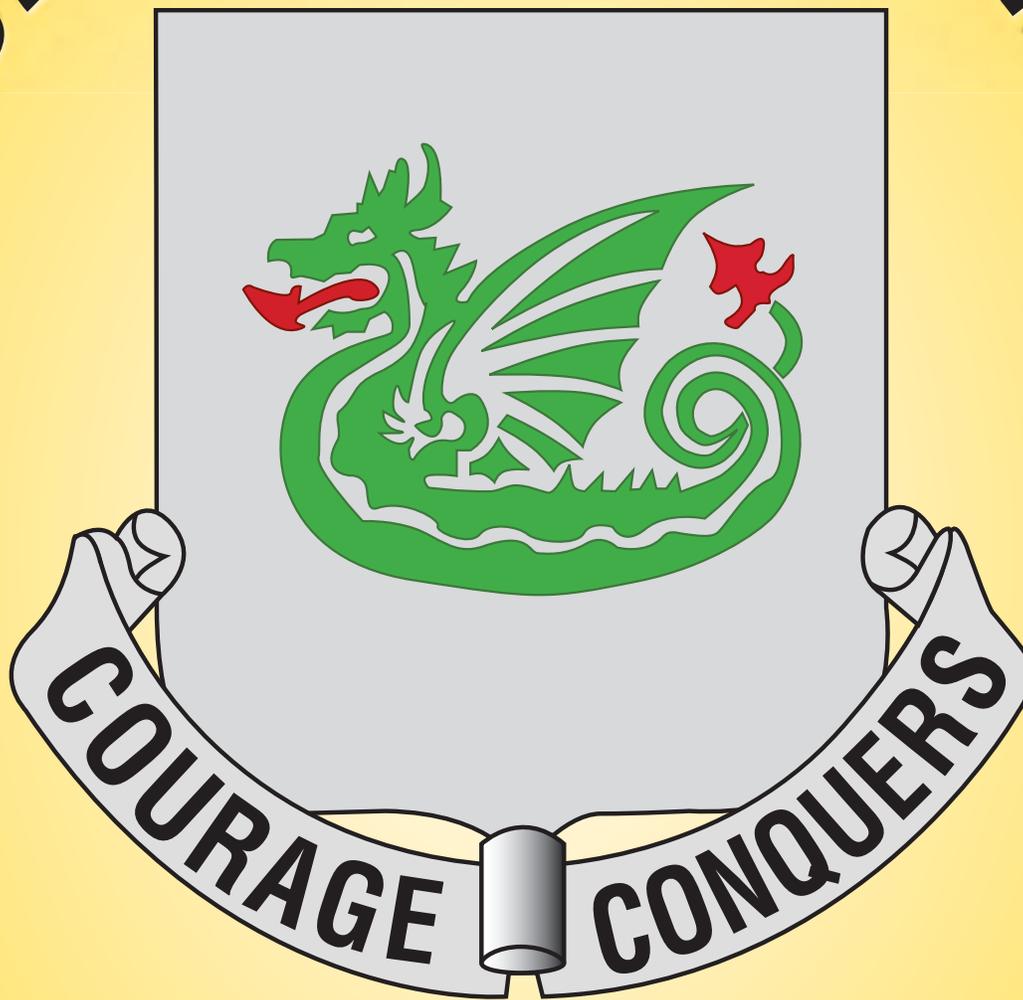
ARMOR will appear quarterly in its accustomed magazine form for the professional development of the Armor Branch. Since we'll be publishing two fewer editions a year, we'll use the extra time for **eARMOR**, as the commandant believes there should be a balance between print and Web-based operations.

eARMOR is the name for a Website that will reorganize the current **ARMOR** Website (<https://www.benning.army.mil/armor/ArmorMagazine/index.htm>), enhance it to a portal, and offer features not found in **ARMOR**. Target date for **eARMOR**'s initial operational capability is April 1, 2013, with full operational capability targeted at Aug. 1, 2013.

Manuscript deadlines 2012

Edition	Suspense for manuscripts
July-August 2012	May 4
September-October 2012	July 2
November-December 2012	Sept. 7
January-February 2013	Oct. 25

37TH ARMOR REGIMENT



The shield is green and silver, the colors of the Armored force, and the wyvern represents the deadliness of the tank. The distinctive unit insignia was originally approved for the 37th Armored Regiment June 1, 1942. It was redesignated for the 37th Tank Battalion Nov. 12, 1943. Nov. 29, 1946 it was redesignated the 37th Constabulary Squadron. Due to unit inactivation, the distinctive unit insignia was redesignated for the 37th Tank Battalion Nov. 30, 1953. Jan. 2, 1958, the insignia was redesignated for the 37th Armor Regiment.

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