Training to Win in a Complex and Uncertain World

by BG Joseph M. Martin, COL David S. Cannon and LTC Christopher W. Hartline

*(**Authors' note:** This article creates a protagonist, the motivated 1st Brigade operations officer, MAJ John J. Planswell. Planswell's experiences mirror those of the lieutenant in MG Sir Ernest Dunlop Swinton's **The Defence of Duffer's Drift**. In that book, the lieutenant learns about Boer War infantry tactics through a series of dreams. In keeping with Swinton's style, Planswell's dreams help him understand how he can better use home-station training resources to prepare for a National Training Center (NTC) rotation. These realizations offer the Army training community thoughts and best practices on maximizing the capabilities provided by the Integrated Training Environment (ITE). The best practices identified in this article provide leaders insights on ways to leverage the resources at home station and the ITE to better train agile and adaptive leaders. The ITE provides leaders the ability to conduct complex, realistic training that represents the operating environment (OE) where Soldiers and leaders confront a myriad of dilemmas they must address. Three major lessons are offered: 1) Units must begin planning for the integration of training enablers early in the development to the unit-training plan (UTP). Army training aids, devices, simulators and simulations (TADSS) provide commanders the ability to represent the complex OE at home station. 2) The ITE provides leaders the ability to execute multi-echelon. 3) The execution of a gated-training concept, a progressive and iterative training methodology, provides an effective mechanism for the creation of a rich collection of experiences that can be called upon to guide decision-making. Finally, the article infers the importance of training overmatch as an enabling capability in the Army's operating concepts.)*

*"Tested or untested, today's Soldiers from the greenest scout to the most senior noncommissioned officer know whether or not they and their unit are tactically and technically proficient." –GEN Robert W. Cone, **Leadership: The Warriors Art***

First dream

I awoke in despair from a restless night's slumber. How could it be? Reflecting on my favorite movie, ***Patton***, how could it be that American forces performed so poorly at the Battle of Kasserine Pass? While the defeat at Kasserine provided the segue for the dramatic entrance of my hero, GEN George S. Patton Jr., there had to be something more. Historians accurately recorded the event, but is there something more? Maybe the lesson is that men of superior physical ability and élan such as my hero are not bested by technology and training.

As this thought crosses my mind, I notice my son's Captain America figure lying on the floor, vacant eyes staring up. He lies there like a Soldier lying on the field of battle. Refocusing on the Pass, it seems to me that Germany's Field Marshal Erwin Rommel and the Afrika Korps had superior tactical command and operational employment – that much is obvious – but there had to be something more.

Momentary relief was gained through a brisk and demanding physical-training session. The staff completed the weekly five-mile run at record pace. However, the exertion provided only temporary respite. The disturbing thoughts returned, and I began to ponder their meaning. I reassured myself that the stoic countenance and name of John J. Planswell – possessing the attributes and prowess of a true-to-life action figure – would one day be command-photo material. With proven talent and some luck, I am certain to rise to positions of increased command responsibility. If only I could obtain the meaning to that dream. In the meantime, I will have to content myself with finalizing and executing the 1st Brigade Combat Team's (BCT) training strategy in support of its upcoming decisive-action training environment (DATE) rotation at NTC.

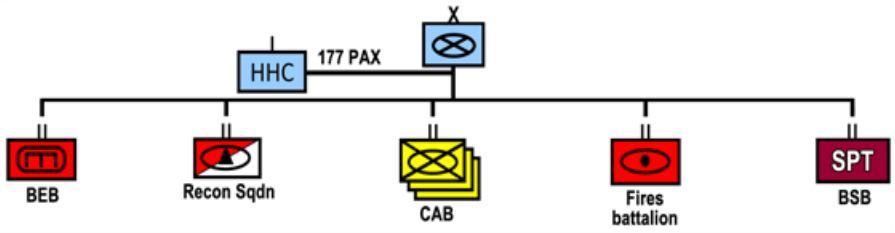

Figure 1. 1st BCT modified table of organization and equipment (MTOE).

It's Feb. 3. I am excited; I begin the day's work by reviewing the brigade's UTP to ensure it accounts for all subordinate units. No time to waste: we are eight weeks out; Red Cycle taskings end in eight weeks. We must make the most out of every training day, especially our live training events. Today we brief Hammer 6 on the result of months of planning. We forecasted all necessary resources and training enablers, integrating them into a complete training plan that optimizes training at the Soldier and small-unit level. We reserved every training area, enabler and range on Joint Base Trained and Ready (JBTR). We packed the schedule with activity, creating as many moving parts and opportunities as possible to create a complex training environment. Commanders and their units will be training all over the installation.

We began our work on the UTP months ago. We started with a review of our training objectives, key collective tasks (KCT) derived from our unit mission-essential task list. These tasks were developed over the preceding months through mission analysis and dialogue with the BCT commander (Hammer 6) and the BCT command sergeant major (Hammer 7).

Following the mission-analysis brief, the commander said, "It is my intent that we leverage the live, virtual, gaming and constructive environments to replicate the complex OE and a tough opposing force (OPFOR). Emphasize leader and operator mission-command information-system proficiency to increase the agility and lethality of units but don't do so at the expense of team cohesion – we fight and win as a team. Finally, aid commanders at each echelon in developing their mission-command ability and the capacity for timely and decisive decisions based on intent."

1st Brigade KCTs

1. Conduct mission command (Army Tactical Task (ART) 5.0)
2. Conduct offensive operations (ART 7.0)
3. Conduct tactical tasks (ART 7.5)
4. Integrate fires (ART 3.1)
5. Conduct FPoL (ART 1.2.8.1)
6. Perform intelligence, surveillance and reconnaissance (ART 2.3)
7. Conduct intelligence support to targeting and information superiority (ART 2.4)
8. Provide logistics support (ART 4.1)

Figure 2. Extract from 1st Brigade training objectives.

Now that we have concluded the plan and its associated schedule, we realize we will never be able to get more than a battalion-sized maneuver space. We will have to adjust to and work with what we have. It is probably just a minor issue. In the end, competent battalion commanders and well-trained Soldiers and leaders will carry the day at NTC. Therefore, while we have to cycle units through training areas, and we do not have the ability to replicate all aspects of the DATE's complex OE, I am confident that the realism provided by live training will pay dividends in the end.

Besides schedule conflicts, other nasty constraints are collaborating to confound my ability to resource training for our three maneuver task forces – a fires battalion, a brigade-support battalion (BSB) and our brigade engineer battalion (BEB) – and associated brigade troops (the military-intelligence (MI), signal and military-police companies). Without adequate training space, how do we conduct integrated training at echelons above task force (TF)? The available terrain is not enough and does not provide the complex urban areas we will require to train the BCT. This will require TFs to cycle through training areas, limiting the development of company-level mission-command proficiency. The teams do not get the number of repetitions required to gain proficiency. What's more, this precludes the combined training of brigade enablers and our TF formations.

We will address these concerns during our three-day BCT command-post exercise (CPX). This will be enough to ensure we arrive at NTC in top shape. Confident of this fact and my astute skill, I walk down the street to the support-battalion headquarters.

I arrive and review their training plans; things are clicking. Our initial discussion turns into a monologue by the support-operations officer, MAJ Sustainright – a tired treatise on the importance of incorporating logistics operations into the total training plan. My only reply is to point out Task #8. The brigade staff will address the

integration of brigade logistics. Nevertheless, he will ensure that the support battalion's training plan addresses its unique mission task requirements. Live maneuver training cannot be jeopardized by lengthy sustainment training. There are enough external constraints inhibiting our training. We cannot afford to exacerbate the situation.

Over the next six months, I observe battalions and companies employing the full set of TADSS available at home station. Hammer 6 and I observed an after-action review (AAR) for 1st TF's field-training exercise (FTX). The TF employed instrumentable Multiple Integrated Laser Engagement System (MILES) gear to train tactical maneuver at the TF-and-below level. The Home-Station Instrumentation Training System (HITS) kept track of the engagements and casualties during the training event. Afterward, the system provided an AAR capability to assist leaders in determining "what happened" and "why." We spent a few hours at the Mission Training Complex (MTC) observing company and platoon maneuver training using the Close Combat Tactical Trainer (CCTT). As an added bonus, we visited with fire-support teams training through the Call-for-Fire Trainer (CFFT). By my score, we are firing on all cylinders at each echelon. We are addressing or will address every one of the KCTs. We are achieving training objectives.

Outrageous. Apparently, during what Sustainright characterized as a "chance encounter," the support-battalion commander voiced "concern" over the lack of integration among the BCT, its supporting enablers and the support battalion to Hammer 6. Nonsense. Sustainright and I spoke. He agreed that he would determine and execute the best method for integrating his companies into battalion events. This portends trouble.

To say that we experienced challenges during our CPX would be an understatement. The simulation was running in the MTC, and we established the brigade tactical-operations center (TOC) on the concrete pad behind the MTC. That said, none of us could remember when any of us had previously set up the TOC. In hindsight, my remarkably liberal timeline was exceptionally aggressive. As day turned to night, plastic panels became the stone of a crucible, crushing will and soul of the headquarters staff. The battalions had set out their Deployable Rapid-Assembly Shelter tents with shells of the staffs to control their respective company training events (force-on-force, FTXs and live-fire exercises). However, I had never forced the establishment of brigade TOC and execution of a knowledge-management plan and our TOC standard operating procedure (SOP). The brigade staff contained many newly minted Command and General Staff College (CGSC) graduates and a batch of recently arrived captains from their respective career courses, anxiously awaiting company command. As we concluded the CPX, now approaching our leadership-training-program exercise, my concerns regarding the BCT's ability to execute mission command grew as I began to appreciate the staff's inexperience and lack of training. We clearly lacked cohesion as a complete staff. We had no idea how to integrate operations with the TF staffs, let alone how to synchronize the actions of key enablers. Our NTC rotation is going to be rough.

…

The BCT returned from its culminating training exercise (CTE) at NTC exhausted and disappointed. The rotation in summary: While we were initially encouraged by the adroit professionalism and cheerful mannerisms of our observers/controllers/trainers, their assurance of "better every day and much better by the end of rotation" fed growing self-awareness. That newfound awareness was rarely pleasant. It became clear that we had not sufficiently maximized our home-station training in preparation for our rotation. We came to realize that trained units required trained and ready staffs proficient in the exercise of mission command and disciplined execution of SOPs. Although the companies' training was accomplished to standard, and even though they operated well as teams, they rarely trained together during the train-up as part of a TF. Frankly, this lack of iterative training at TF level left companies unprepared for the burdens and simultaneous demands pressed upon them by the DATE. The high-fidelity training environment at NTC presented many competing and conflicted demands. Leaders and their teams were not anticipating threat actions and shaping the OE. They were reacting to the enemy and bending under the pressure.

For their part, the staffs were lagging indicators, providing factual reports – not synthesized staff analysis – that would enable decision-making and the execution of mission command. Stated plainly, commanders were unable to make timely and accurate decisions or to provide subordinates informed guidance given the lack of proper staff work.

We had to fight the enemy of the moment – and our own cynicism. Our ability to anticipate was extremely limited, and our ability to initiate was close to impossible.

Prior to the CTE, we assumed we would collectively know what to do. We had all been in the Army a decade or two. My peers in the battalions lamented that their single TF collective-training event, though under field conditions, was inadequate to get them to where they need to be.

Upon returning to JBTR from the CTE, COL Dowell (Hammer 6) and CSM Tryharder (Hammer 7) stoically reviewed the BCT's NTC take-home packet and the execution of the BCT's training strategy. They gathered the BCT's leadership and led a post-rotation AAR that resulted in the following lessons-learned:

- Nothing replaces the realism provided by live training under field conditions. However, the amount of live training a unit can conduct is limited by competing resources and the live training environment's ability to replicate facets of the complex OE. The BCT used 46 of 53 available ranges; that sounds great, but it was not enough by itself. What's more, we had companies moving all over the installation to execute training. Administrative movement between training areas diminished training time. We had not expected this to become the significant overhead it was determined to be. In short, live training should be one aspect of a total training environment. Live training events are costly, time-consuming and require more control, all of which effect throughput and repeatability. However, they are critical and require significant preparation to get the most out of the event.
- Brigade training does not occur unless the whole brigade trains. That seems intuitive, but our UTP failed to include the support and fires battalions in a meaningful way. We did next to nothing with the engineers. And like the maneuver companies, the companies within the fires and engineer battalions trained predominantly at or below the company level, with minimal interaction between the companies or their peers in the maneuver battalions. We could have integrated more of the fires battalion into the training conducted by the maneuver companies. Likewise for the engineer battalion. How could we have created a shared training environment for the Cavalry squadron and the fires battalion? We did not exercise casualty evacuation. This could have easily been done in any of the training events. In the future, the brigade only truly trains when the brigade trains together.
- As identified on the scorecard (Figure 3), our TADSS utilization was paltry. Rather than integrating TADSS to create a single, complete, medium-fidelity training environment focused on allowing maximum iterations, we executed our training plan, using TADSS in a sequential manner leading up to our live training events. We had enough CCTT man-modules to form two mechanized teams but instead trained Armor and mechanized infantry company-pure. The battalions trained as battalions and not as task forces, and the companies trained as companies, not as company teams. The CFFT was used once to train a handful of new personnel. We never used the Virtual Route-Clearance System.
- Our understanding of the complexities of a DATE scenario was inadequate. We focused on combined-arms maneuver (CAM) and spent little time on wide-area security. After a decade of counter-improvised-explosive-device operations, we accepted risk here. We did not realize that what we experienced individually was not shared collectively, that collective-training events were necessary to develop future shared understanding. Common experiences are the foundation for shared understanding. We did not leverage our virtual and constructive capabilities to conduct leader's certification training and Tactical Exercises Without Troops. Our newly arrived leaders would have benefited from the experience of our senior and experienced leaders.

In the end, I realized I must improve my understanding of all TADSS and how they can be best brought together into a training plan to enable complex, robust and realistic iterative training in echelon. I sought the advice of our division modeling and simulation officer and reviewed ITE best practices at https://milgaming.army.mil/Entrance/Product.aspx?productid=20 and within the ***Leader's Guide to the Integrated Training Environment*** to improve my understanding of the capabilities and prepare the brigade for our follow-on mission.

	Training device	Usage		Training device	Usage
	JLCCTC-ERF	1/1		VBS3	--
	AVCATT	4/4		MILES	--
	EST II	1/2		VCTS	0/1
	CCTT	14*/28		BiLAT	--
	CFFT	2/7		Ranges	3/3
	RVTT	0/4			
	DSTS	2/3			

Figure 3. ITE scorecard.

Second dream

Could it be? It's Feb. 3. I awake with excitement and according optimism. A second chance? In the recesses of my memory, I recall our previous training plan and the outcome of our CTE. Informed by this, I strike out, determined to address the shortcomings so painfully noted. When we review the BCT commander's training objectives this time, we are going to do better. We will design our training program informed by last night's fevered vision.

In the office, I begin to gather the team and align events and a common scenario around all the KCTs. After a few phone calls, we assembled our team with personnel from the MTC and the division's modeling and simulation officer. As a group, we dug into the problem.

Informed by Army training doctrine, we quickly designed an iterative training methodology that allows Soldiers and units to progress through a series of gates that require proficiency in virtual-training systems prior to progressing to live training. CSM Tryharder led the effort by enlisting the BCT's noncommissioned officers in developing and implementing a training plan that required junior leaders to train individual through crew collective training using Engagement Skills Trainer (EST) 2000 for individual weapons proficiency; Virtual Land-Navigation Trainer; CFFT II; crew training on scenarios in CCTT; Aviation Combined Arms Tactical Trainer (AVCATT); Reconfigurable Vehicle Tactical Trainer (RVTT); and Virtual Battlespace 3 (VBS3) scenarios. Once deemed proficient, Soldiers would advance to the next level in this "gated training strategy" (Figure 4), from training on individual tasks to small-unit collective training.

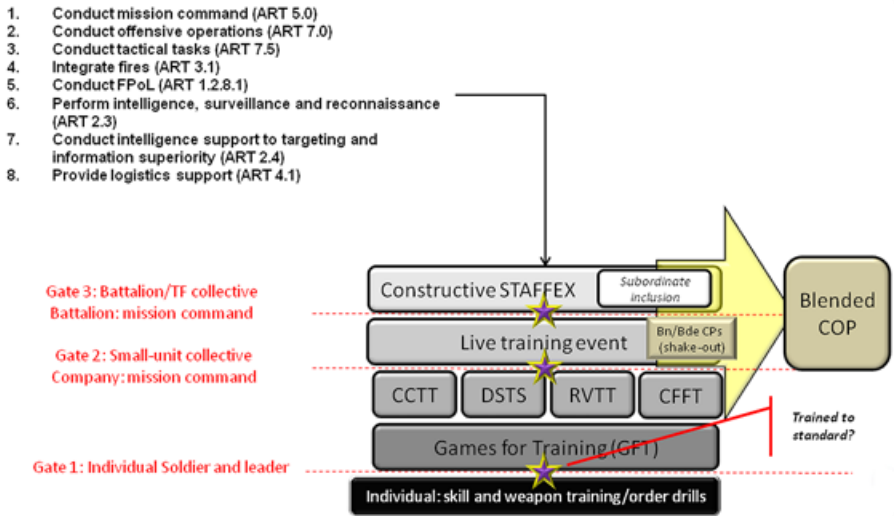

Figure 4. Training strategy – a gated approach.

Meanwhile, the BCT commander implemented a leader-training strategy that used VBS3 scenarios to educate and train leaders on the complexities of DATE scenarios and the contemporary threat portrayed in the OE. This provided all involved with some familiarity of the terrain and conditions the BCT would face during the impending NTC rotation.

Also, the BCT leadership team implemented a leader-certification program. Leaders would undergo certification training that displayed proficiency in each supporting leader task before beginning squad through TF collective training. We added leadership professional-development seminars to our UTP. The seminars took the form of professional discussions on dilemmas we would face in the conduct of unified land operations within a DATE scenario. I watched, surprised and satisfied, as this effort and these events took on a life of their own in professional dialogue – and off-duty.

The BCT executive officer and I, along with the TF and battalion field-grade officers, developed a training strategy to conduct TF and BCT mission-command exercises. Paramount to the strategy was emphasizing operator proficiency on mission-command information systems. As operator proficiency progressed, BCT, TF and battalion staffs began conducting collective Army Low-Overhead Training Toolkit (ALOTT) DATE-scenario staff collective-training exercises. Battalion staffs trained mission command while involving company headquarters in the response cells to reinforce proficiency on mission-command information systems at operator level while validating unit SOPs.

Progression brings a richer experience and more complex tactical problems – we discovered this through the "crawl-walk-run" methodology identified in ***The Leader's Guide to Unit Training Management***. With a little imagination and ingenuity, we conceived a plan for the inclusion of the engineer, fires and support battalions. We proposed the addition of a "subordinate inclusion" (Figure 4) into the BCT staff exercise (STAFFEX) to drive blended training at the BCT level. We would set two companies into CCTT and a handful of crews in the RVTT. The companies would fight through contact in CCTT.

The general idea was that CCTT casualties would be treated and medically evacuated. Once a Soldier became a casualty in a CCTT simulator, the Soldier would be treated by combat lifesavers and evacuated by the company first sergeant. An aid station was placed in the simulation. This required companies and platoons to address all phases of a tactical operation, including the establishment of casualty collection points as part of consolidation and reorganization. When the first sergeant reached the aid station, medics on-site at MTC would go through the process of triaging the wounded. Further evacuation was accomplished in a similar manner until Soldiers reached Role II care the BSB provided.

The treatment of casualties and execution of refueling operations brought the support battalion into the CPX while providing another training opportunity for one of our mechanized teams. The engineer battalion would execute

their constructive training event before the BCT CPX. During the CPX, they played a critical role in the forward-passage-of-lines (FPoL) of the maneuver task forces through the reconnaissance squadron. They would also conduct mobility/counter-mobility operations in one sector and assured mobility operations along major lines of communication in another sector. This realistically depicted the complexities of the contemporary OE.

The assured mobility operations would occur in the Virtual Clearance Training Suite (VCTS). While an individual was responsible for aligning the VCTS with units in the constructive simulation, they call it swivel-chairing; we thought that additional effort was a minor nuisance considering the return-on-investment for the incorporation of BCT enablers.

Finally, with the assistance of the MTC personnel and the division's modeling and simulation officer, we developed a plan to feed BCT and TF TOCs with a common operating picture (COP). The result was enriched training that provided iterative decision-making drills that improved proficiency and, most importantly, Soldier and leader confidence in their equipment and SOPs.

Two weeks into our training plan, the battalion, TFs and BCT were required to establish CPs. The units were encouraged to migrate relevant functions from their fixed sites into their CPs. We agreed that mission-command information systems would be the device of choice for information exchange. To that end, we even had first sergeants submitting daily unit reports to the TFs and battalions for inclusion in Battle-Command Sustainment Support System (BCS3). The best first sergeants required their subordinates to submit "Yellow 4" logistics reports to drive their assessment and submission to the battalion or TF. Our logistics-status reports were taking on the role of informing the brigade estimate with timely and accurate information.

Through all of this, and over the next month, we observed Soldiers and junior leaders owning the training. Each organization is executing training a little differently. The BCT is making great progress. Our confidence grew every day as we achieved higher levels of mission-command proficiency during every TF and battalion virtual, constructive and live training exercise. With many more common training experiences and a sense of shared understanding, we left JBTR confident in our capabilities.

…

Our performance at NTC would be best described as *satisfactory*. We had some success as a team, but we still seemed to be a step behind the OPFOR and out of step as a team as we fought through the demands of the complex OE. It was determined that our staffs had not arrived ready for the experience. Our focus on individual, leader and small-unit training left too little time to effectively achieve the mission-command proficiency required to achieve the requisite level of readiness to face a world-class OPFOR in a complex OE.

Upon returning to JBTR, COL Dowell and CSM Tryharder reviewed the BCT's NTC take-home packet and the BCT's training strategy. They gathered the leadership and led a post-rotation AAR. As the executive officer and I walked into the BCT conference room for the AAR, I had an eerie feeling I had been here before in the alternative future imagined in my dream – the future where events had not turned out as well as they just had.

The AAR went well and emphasized the following lessons-learned:

- Begin preparations early in the planning process to exercise all echelons. As TADSS were built around legacy training models – they are optimized to train certain skills at specific echelon – it is necessary to consider how they best tie together into a complete training environment. In short, all TADSS and training enablers need to be brought in early to ensure success. The successes we did enjoy were, in part, the result of early initial planning among ourselves and with the MTC, assisted by the division modeling and simulation officer. A few hours of thoughtful work paid dividends for many months. And, not only did it increase training throughput and quantity, it also increased the quality of training available over the span of the train-up.

As before, our gated-training strategy and leader-certification programs ensured that Soldiers and their leaders met the necessary performance prerequisites prior to advancing to more complex tactical problems.

We issued task-organization early so units could train as TFs and teams, as opposed to battalions and companies. In doing so, we maximized our TADSS utilization – maxing out all the CCTT man-modules for weeks at a time. Also,

we incorporated AVCATT (four of four) with CCTT modules (28 of 28) to train complex multi-echelon and true CAM. The reconnaissance squadron joined CCTT (14) and CFFT (two) and pulled them into a CFFT scenario, executing across campus for observer-fire-maneuver training at the troop level.

- We improved the incorporation of TADSS into our training plan. Our strategy ensured that Soldiers and units were prepared to conduct increasingly complex training and progress toward task proficiency. Concerning that, I am reminded of a previous time when I stated that UTPs need to include all enablers and expected attachments – in this case, the MI company. Our inability to synchronize effects and to discern the enemy's intent, or even how to collect accurately on him, was a heavy weight we carried into every fight. Poor planning resulted in conflicted plans – improper airspace management and asset deconfliction shut down fires and limited the movement of air assets at critical times. We were not able to mass effects at the decisive point. All this could have been prevented if we had trained using simulation (Joint Land Component Constructive Training Capability-Entity Resolution Federation (JLCCTC-ERF)). Once trained, a staff could use a portion of the "ERF" called ALOTT to assist them in rehearsing and visualizing over time and space the employment of the BCT's capabilities. The conduct of an effective rehearsal is crucial to any plan. We found ALOTT to be helpful in conducting key-leader and functional rehearsals.
- Units must conduct iterative, complex, multi-echelon training to achieve the level of proficiency required to obtain the requisite level of readiness to face and defeat a world-class OPFOR in a complex OE. A single iteration of a TF/BCT culminating exercise is not enough to achieve proficiency, shared understanding and synergy among the many teammates. Units must leverage the blended and integrated training capabilities that allow commanders to begin conducting multi-echelon training earlier in their training strategies to provide the iterations necessary to achieve mission-command proficiency.

Upon completion of the AAR, I sought the advice of our division modeling and simulation officer. As I walked into her office, Yogi Berra's famous quote inexplicably came to mind: "It's déjà vu all over again." With the recollection of our dialogue in the could-have-been, I am intent in determining how we can improve if I am required to repeat this event again tomorrow … today … maybe that's today again tomorrow? We reviewed the BCT training strategy, and she instructed me on how the BCT could increase proficiency by integrating training capabilities to expand the training space and complexity of the OE, beginning multi-echelon mission-command training earlier in our training strategy. She provided me a great site, the ITE Webpage, https://milgaming.army.mil/Entrance/Product.aspx?productid=20, to learn more about ITE and to review and share best practices.

	Training device	Usage		Training device	Usage
	JLCCTC-ERF	1/1		VBS3	--
	AVCATT	4/4		MILES	--
	EST II	1/2		VCTS	1/1
	CCTT	28/28		BiLAT	--
	CFFT	2/7		Ranges	3/3
	RVTT	4/4			
	DSTS	3/3			

Figure 5. ITE scorecard – second dream.

Third dream

I am excited. It's Feb. 3. I find new meaning in my work and await the day with eager anticipation. Yesterday was our last day on Red Cycle. This seems familiar, whether prescience or the result of events from the night before; with a troubled mind I count them as blessings. I strike out with vigor. The situation remains the same: the BCT Red Cycle tasking period is currently "amber" but will be "green" next quarter ahead of our NTC rotation. As before, I hurriedly place phone calls and gather the team in an attempt to affect our eventual outcome in light of my most recent reverie.

By happenstance and without my previous knowledge, it turns out we have a modeling and simulation officer at the brigade. He arrived a month ago from his qualification course. I decided to engage the MTC director and ask him for "jump TOC" office space for my Functional Area 57 so that he could embed within the MTC. I shared a few thoughts with my modeling and simulation officer, lessons from the preceding evening. That investment paid off nearly immediately. He began pulling BCT units into the MCT for training and teaching junior leaders the capability and value of the TADSS available at home station.

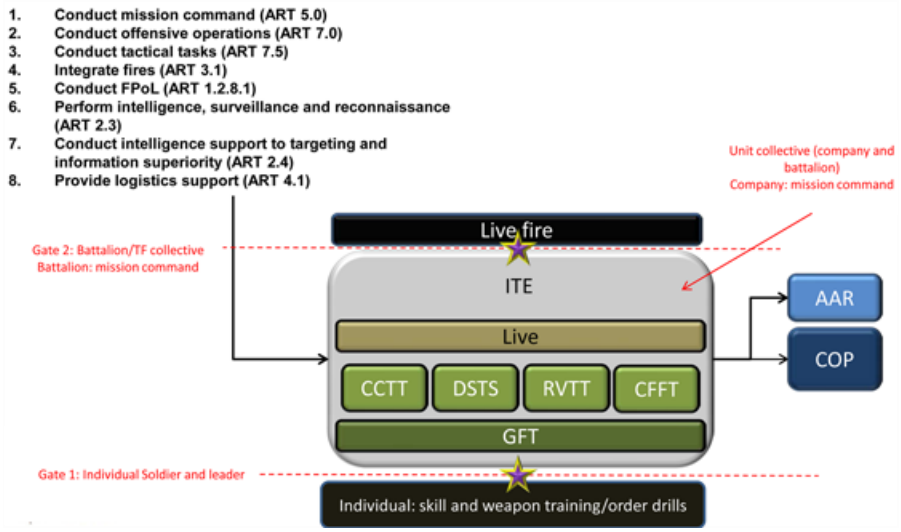

Figure 6. Brigade training strategy.

The happy, chance meeting with our modeling and simulation officer clued me into the ITE, enabled by the live-virtual-constructive integrating architecture (LVC-IA). Enabled by the integrating architecture, the ITE provided me the means to not only conduct multi-echelon training, similar to the previous night's blended training, but it also provided a comprehensive AAR capability for review in two dimensions (or three dimensions). As a group, we determined this should be the cornerstone of our train-up strategy.

I adjusted the gated-training strategy for inclusion of the ITE. We stressed the utility of using the ITE as a mechanism for bringing entire battalions into a single exercise. LVC-IA supports the use of a common scenario with common data for all the training domains (live, virtual constructive and gaming). We had an entire TF instrumented with HITS and MILES training in a common scenario with combat-vehicle crews in CCTT and RVTT. The reconnaissance squadron designed a training strategy that included CCTT, Dismounted Soldier Training System (DSTS), CFFT and JLCCTC-ERF. I understand that when combined, the technical control is ungainly, but in the end, they were able to employ a workaround and gained the capability to conduct observer/sensor-shooter interactions in a common training environment while combat vehicles maneuvered within the simulation.

Better yet, when the battalion and squadron staffs were conducting staff training using the JLCCTC-ERF, the LVC-IA integrated companies, teams and troops into the same scenario, providing them the ability to continue training in virtual systems while supporting higher-headquarters' training needs. Simply put, the staff and troops could train at the same time; it was no longer a one-or-the-other proposition. As we struggled to resource staff training but not at the expense of subordinate organizations, I came to learn that various components of the JLCCTC can be "tuned" to the training audience. When the entire staff is involved and a high-fidelity training environment is required, the Joint Conflict and Tactical Simulation is used. If only a few people are training and a low-overhead capability is more appropriate, ALOTT is employed.

If CCTT was not available or was not the appropriate tool, leaders used gaming technologies to execute the same platoon battle drills and company SOPs they had previously trained within CCTT. In many cases, the employment of these training enablers accomplished the same training objectives but at a reduced cost in planning time and coordination. In essence, we would eventually enter the live training environment at a much higher level of proficiency at all levels.

Through all of this, we determined that a shortcoming as a staff was related to our inability to provide the commander a complete, correlated intelligence picture and accurate staff estimates. We addressed this threefold:

- First, we increased emphasis on the training and employment of the Distributed Common Ground Station-Army.
- Second, we increased the S-2's role in our order drills and professional seminars. In these events, they were made to role-play the freethinking threat. Over time, the "two-shop" began to progress from

briefing the "what" – in other words, providing historical reports – to providing the "so-what" and "which-means" based on their analysis of the situation. This mantra was circulated around the staff. The commander required the reasoned analysis of experts, not someone to read him the significant-activities log.

- Third, the commander demanded that the S-2 and his staff participate in all BCT staff training. He even coordinated for folks from the division's G-2 shop to provide the OPFOR commander during the train-up to our CTE.

It became apparent that repetition increased professional introspection. Once they realized the training was expected to progress over a series of events rather than evaluated at a single CPX, individuals began to take more initiative during the training and played a more active role in the AAR. By the conclusion of the brigade train-up, battalions had conducted multiple iterations of mission-command staff training, as had the brigade. The staff had formed into a competent whole, and the commander was comfortable with the organization and his subordinate commanders.

…

The NTC rotation was a success. Key to our success was the ability to operate as a united whole with a common task and purpose. That unity of purpose and action was achieved in part by repetitive multi-echelon training enabled by ITE. Units could repetitively train with one another at echelon. What's more, this complex training environment – along with the iterative training methodology – enabled the BCT's ability to train to proficiency on all its KCTs within an environment indicative of the one it would eventually face at its CTE. This more pleasant dream concluded with the following lessons:

- The complex training environment provided by the ITE stresses mission command by providing the commander the ability to train mission command at echelon. The ITE provides commanders from company team to BCT the ability to train together within a single complex OE that replicates the dilemmas presented by the DATE during military operations in the contemporary environment.
- Ingenuity and initiative are laudable character traits in general, but they pay handsome dividends in planning training. Many of our best ideas came from Soldiers and junior leaders who are not only comfortable with technology but have a better grasp of their challenges and an eye toward a technically enabled solution. They are comfortable with the technology because they have never known a world without a computer or the Internet, and their notions of proper, formal training are not constrained by layer upon layer of the previous generation's training strategies. That they have a unique understanding is expected, but they recognize the specific needs of the individual as a critical part of the team. This knowledge enables them to effectively address the unit's training needs through a progressive and iterative process.

Pleased with the result, I settle back into my seat to enjoy a paunch cigar. As languid smoke whirls around my sunburned head, I feel the familiar ephemeral effects begin to take hold.

Maybe this is our story: technology is an enabler, never meant to replace training, but it is necessary to create conditions that enable Soldiers and leaders and teams to succeed in uncertainty. The lesson from Kasserine is that preparation, combined-arms integration and individual initiative win in decisive operations. Training mission command develops agile and adaptive leaders with initiative. The ITE gives commanders the ability to conduct progressive multiple repetitions of tough, realistic training at echelon. This provides our formations training overmatch. Training overmatch produces an operating capability for informed decision-making and decisive action as learned from an iterative and progressive training program.

We must continue to train as if we are at war, leveraging all our resources to retain training overmatch. I finally found peace of mind.

BG Joseph Martin commands NTC and Fort Irwin, Fort Irwin, CA. Previous assignments include deputy commanding general for the Combined Arms Center-Training, Fort Leavenworth, KS; deputy commanding general (maneuver), 1st Cavalry Division, Fort Hood, TX; commander, Army Operational Test Command, Fort Hood; III Corps chief of staff, Fort Hood; and commander, 2nd Brigade, 1st Infantry Division, Fort Riley, KS, and Baghdad, Iraq. His military schooling includes U.S. Military Academy and CGSC. BG Martin holds a master's of arts degree in education from

the University of Louisville. His awards include the Defense Superior Service Medal, Legion of Merit and Bronze Star Medal with "V" device.

COL David Cannon is the U.S. Army Training and Doctrine Command (TRADOC) capability manager (TCM) for ITE. Previous duty assignments include deputy chief of operations, Operations Group Delta, Mission Command Training Program (MCTP), Fort Leavenworth; commander, 3rd Army Special Troops Battalion, Shaw AFB, SC; executive officer, MCTP, Fort Leavenworth; chief of training, Operations Group Charlie, MCTP, Fort Leavenworth; and TF senior observer/controller and TF senior maneuver observer/controller, Fort Polk, LA. His military schooling Infantry Officer Basic and Advanced courses, Scout Platoon Leader's Course and CGSC. COL Cannon holds a bachelor's of arts degree in general studies from Wichita State University, a master's of science degree in adult and continuing education from Kansas State University and a graduate certificate in occupational-health psychology from Kansas State University.

LTC Christopher Hartline is the simulation future-operations planner for TCM-ITE, National Simulation Center, Fort Leavenworth. Previous duty assignments include modeling-and-simulations systems engineer, Environment Development Division, Deputy Director Joint Environment, Joint Staff J-7; simulation and technical planner, Environment Development Division, Deputy Director Joint Environment; student (modeling and simulation), Advanced Civil Schooling, Old Dominion University, VA; battle staff and Cavalry troop observer/controller/trainer, Armor battalion and Cavalry squadron training team (Cobra), NTC Operations Group, Fort Irwin; and commander, Alpha Company, 3-67 Armor Battalion, 4th Infantry Division, Fort Hood. His military schooling includes Armor Officer Basic and Advanced courses, Cavalry Leader's Course, CGSC and Joint Forces Staff College, Norfolk, VA. LTC Hartline holds a master's of arts degree in management and leadership from Webster University, a master's of military arts and science degree from CGSC and a master's of science degree in modeling and simulation from Old Dominion University. He maintains a joint planner and strategist additional-skill identifier.

Acronym Quick-Scan

AAR – after-action review
ALOTT – Army Low-Overhead Training Toolkit
ART – Army tactical task
AVCATT – Aviation Combined Arms Tactical Trainer
BCT – brigade combat team
BEB – brigade engineer battalion
BiLAT – Bilateral Negotiation Trainer
BSB – brigade-support battalion
CAB – combined-arms battalion
CAM – combined-arms maneuver
CCTT – Close Combat Tactical Trainer
CFFT – Call-for-Fire Trainer
CGSC – Command and General Staff College
COP – common operating picture
CP – command post
CPX – command-post exercise
CTE – culminating training exercise
DATE – decisive-action training environment
DSTS – Dismounted Soldier Training System
EST – Engagement Skills Trainer
FPoL – forward passage of lines
FTX – field-training exercise
GFT – Games for Training
HHC – headquarters and headquarters company
HITS – Home-Station Instrumentation Training System
ITE – Integrated Training Environment
JBTR – Joint Base Trained and Ready
JLCCTC-ERF – Joint Land Component Constructive Training Capability-Entity Resolution Federation
KCT – key collective task
LVC-IA – live-virtual-constructive integrating architecture
MCTP – Mission Command Training Program

MI – military intelligence
MILES – Multiple Integrated Laser Engagement System
MTC – Mission Training Complex
NTC – National Training Center
OE – operational environment
OPFOR – opposing force
PAX – personnel
RVTT – Reconfigurable Vehicle Tactical Trainer
SOP – standard operating procedure
SPT – support
STAFFEX – staff exercise
TADSS – Training Aids, Devices, Simulators and Simulation
TCM-ITE – TRADOC Capability Manager-Integrated Training Environment
TF – task force
TOC – tactical-operations center
TRADOC – (U.S. Army) Training and Doctrine Command
UTP – unit-training plan
VBS3 – Virtual Battlespace 3
VCTS – Virtual Clearance Training Suite