

The Combined-Arms Breach in the Korean Theater of Operations: A Summary of Lessons-Learned

by LTC Mark R. McClellan, CPT Christopher D. Mathews, CPT Sean T. Rabbitt, 1LT Lynn M. McCrum and 1LT Roman L. Burke

In 2003, the *ARMOR* magazine article “Preparing for Iraq” identified that “the current training scenarios and task organizations that our armor and mechanized-infantry battalions use, culminating with a rotation at the National Training Center (NTC), is not sufficient for preparing them for duty in Iraq.” The article emphasized a shift from brigade- and battalion-level operations to small-scale operations at the company level.

Just as many battalions were unprepared for operational considerations unique in Iraq in 2003, many of our Army’s formations are currently underprepared for combat operations in theaters that could become the next major war zone of the 21st Century. For example, training operations at NTC do not prepare our Army for combat in the Korean Theater of Operations (KTO). Specifically, conducting a combined-arms breach in the KTO differs significantly from breach operations conducted at NTC.

During 3rd Brigade, 1st Armored Division’s 2018-2019 rotation to the Republic of Korea (RoK), 1st Battalion, 77th Armored Regiment, conducted multiple iterations of combined-arms breach training. Throughout the rotation, the battalion learned firsthand that conducting a breach in the KTO differs considerably from conducting a breach in the desert environment of NTC, which has more maneuver space and requires larger formations to conduct breaching operations. The severely restricted and canalizing terrain of the KTO requires a breach task force to adjust its task organization and use dismounted infantry to clear severely restricted terrain before committing mounted elements.

Units that could conduct a combined-arms breach should heed lessons cultivated from breach training in the KTO. The 1-77 Armor’s battalion task force (TF) combined-arms breach training yielded multiple lessons-learned for combined-arms breaching in the KTO. These lessons generated recommendations for effective task organization, best practices for mission command and synchronization, and the commitment of specific assets at the point of breach.

Training for breach

Throughout a seven-week collective training period, 1-77 Armor leveraged live, virtual and constructive training at each echelon of the organization. Company commanders used simulators to familiarize their units with the restricted terrain that characterizes the KTO. During the seven-week collective training progression, each tank company conducted more than 40 hours in the simulator. Company commanders then took their companies and executed two weeks of crew, section and platoon situational-training exercises focused on breaching operations. During this live training, engineer platoons from the brigade engineer battalion, 2nd Engineers, supported the training with mobility and counter-mobility assets.

While the tank companies focused on mounted breach operations, the infantry company, Charlie Company, 1-77 Armor, executed a deliberate defile training progression. This progression included air-assault training, including a live air assault. The company focused on maneuvering onto, across and between the high ground that canalizes defiles. This training constituted a significant change from dismounted operations at NTC or Fort Bliss, TX. The unit’s Bradley Fighting Vehicles (BFVs) could only provide overwatch as the dismounted squads seized footholds on hills. The company split platoons between two sets of high ground, requiring significant coordination and tracking by the company command element to prevent fratricide and synchronize movement.

Also, the company had to ensure its mounted elements moved in support of the dismounted elements. Dismounted squads operating on high ground under a thick forest canopy made this coordination difficult.

To validate the battalion’s proficiency to execute breaching operations in Korea, 2nd Infantry Division executed a breach culminating training event (CTE). This event occurred over the course of a week and concluded with the battalion executing a combined-arms breach, with an RoK army (RoKA) assault force on the Rodriguez Live-Fire Complex Digital Multi-Purpose Range Complex. The breach CTE validated the battalion’s ability to execute a

combined-arms breach in a defile while operating in support of RoKA forces. This training progression and the breach CTE provided our leaders significant insights into the defining aspect of breaching in Korea, specifically regarding task organization, mission command and synchronization, and assets and actions at the breach.



Figure 1. An M1A2 Tank from A/1-77 Armor provides security while an ABV from 2nd BEB breaches an anti-vehicle ditch during a combined-arms breaching exercise May 9, 2019, at Rodriguez Live-Fire Complex, RoK. The exercise incorporated elements from 1-77 Armor, 2 BEB, 11th Engineers and units from the RoK. (Photo by SGT Alon Humphreys, 3rd ABCT, 1st Armored Division)

Task organization

The task organization of a breach task force in the KTO differs from common task organization most units normally train with when preparing for a doctrinal breach. Due to terrain constraints in the KTO, it is very difficult to employ company-sized support-by-fire (SBF) positions. Based on the terrain, a single M1A2 platoon may effectively suppress enemy overwatching the obstacle. Committing more than a single tank platoon to act as an SBF degrades the survivability of the SBF without measurably increasing its ability to suppress the enemy.

Because of these terrain and space constraints, the TF commander should be prepared to fight the breach with a company team. A company team needs to include company breach, assault and support forces with a platoon of attached engineer assets. In support of mounted breach companies, a company of dismounted infantry is necessary to secure high ground above breach-location defiles. Echeloning the breach by company team as opposed to a battalion TF allows the battalion to have one complete company team in reserve for contingency planning. This added flexibility ensures that the breach TF retains its ability to apply concentrated effort rapidly to any identified weakness. This flexibility can be increased with the addition of a second engineer platoon from an attached engineer company organized in such a way to have redundant engineer assets in reserve.

A recommended organization for the company breach force includes one platoon as the SBF, one platoon as the breach force and one platoon to either act as the independent assault force or as augmentation to an attached infantry assault force. This organization allows operations in severely restricted terrain and provides less confusion during an already complicated operation. Fewer moving pieces reduce congestion at the point of breach.

The task organization that our battalion's breach force, Alpha Company, 1-77 Armor, used during 1-77's combined-arms breach training consisted of a breach platoon with two organic plows and one organic mine roller, an SBF platoon with the remaining plow and an assault platoon. This allowed the bulk of the breach force's organic breach assets to mass near the point of breach, with one asset available in the SBF position for redundancy. This asset distribution also allowed the assault platoon better mobility by not having any breach assets attached to them.

Whatever measures the breach task force can take to reduce congestion and maximize use of effective obscuration are centrally important during planning and coordinating with adjacent units.

A tank platoon, or a tank platoon supplemented with attached M2A3s, can successfully suppress enemy elements contesting any breach operation. Rather than employing an entire company as an SBF, a platoon may maneuver and defeat an emplaced enemy with direct fires and coordinated indirect fires. Congestion in the breach area of operations is a key consideration for a battalion TF commander as he or she task-organizes units at his/her disposal. If the terrain dictates, a second platoon or another section can reinforce the SBF.

A potential decision point for future operations is the implementation of M2A3s to act as a supplementary SBF after a tank platoon has established a hasty SBF. After defeating any mechanized or armored resistance, the target set for the SBF is much more suited to the main armament of the M2/M3 Bradley. The tighter surface-danger zones of the M2A3 armament also allow for a longer period of effective suppression before shifting and ceasing fires as the breach and assault forces advance to the point of breach.

When planning for local security during breaching operations, a TF commander must be flexible and cognizant of deadspace. During breach training in the KTO, 1-77 Armor used its organic infantry company, Charlie Company, to clear two severely restricted ridgelines that overwatched the enemy obstacle. Dismounted infantry play a central role in securing any defile leading into the point of breach and can provide local security as reduction and forward-passage-of-lines operations begin later in the operation. The KTO terrain favors dismounted infantry, and the prevalence of light anti-tank weapons will likely be the largest threat during the most vulnerable phases of the operation.

Using dismounted infantry to clear severely restricted terrain prior to committing mounted assets sets the conditions for a successful breach. Charlie Company, 1-77 Armor, used two dismounted infantry platoons during its defile clearance operation. Each platoon cleared a ridgeline on either side of the point of breach, one to the north and one to the south. The battalion S-2 identified both ridgelines as key terrain due to their ability to offer clear observation and fields of fire to the avenue of approach leading to the point of breach.

Furthermore, the battalion staff assessed that the enemy on the high ground consisted of no more than one enemy infantry squad with small arms and anti-tank capabilities. Therefore, each friendly infantry platoon attacked with a 3:1 ratio against the templated enemy. Also, Charlie Company, 1-77 Armor, used a platoon of BFVs to establish a local SBF position in a clearing some 200 meters south of one of the ridgelines.

Before the TF commander committed mounted assets to the point of breach, the dismounted infantry platoons cleared subsequent phaselines to a limit-of-advance (LoA) parallel with the enemy obstacle belt. As dismounted infantry cleared each phaseline, mounted elements bounded forward to maintain mutually supporting distance with dismounted elements. Once the defile clearance force reached its LoA, the TF commander committed his support force to the primary SBF position. The defile clearance constitutes a time-consuming mission within the larger operation. Thus, the TF commander must deliberately plan the sequencing of the defile clearance, suppression and obscuration of the enemy, and the commitment of breach assets to the point of breach.

The battalion breach TF commander should generally commit no more than a company team to a single point of breach. Considering the severely restricted nature of terrain in the KTO, committing a battalion-size TF to a single point of breach decreases the TF's effectiveness by congesting the point of breach and increasing the risk to friendly forces. Attaching organic plows and rollers to the breach force while maintaining an engineer platoon in reserve establishes redundancy and allows the battalion TF commander to remain flexible. Augmenting mounted platforms with dismounted infantry in the severely restricted terrain surrounding the point of breach allows the TF commander to mitigate risk to force posed by dismounted anti-tank weapon systems.

Mission command and synchronization

The breach task force must thoroughly apply mission-command principles to successfully breach in the KTO. The company team commander's ability to act and make decisions independently is key when terrain and jamming degrade communications. Company team commanders must understand the battalion commander's intent and be able to make independent decisions within that intent at the point of breach. The subordinate commander's shared understanding of the higher commander's intent and an effective use of mission command allowed successful breaching operations during training.

The TF's implementation of redundant communication systems enhances leaders' ability to apply mission command at multiple echelons. During training, 1-77 Armor's use of Joint Capabilities Release (JCR) and Joint Battle Command Platform (JBCP) systems proved effective for communication with the tactical command post for progress updates. However, the time required to send messages over free text limited the company commander's ability to transmit and receive guidance during the execution of a contested breach. It is unrealistic to use JCR/JBCP as primary communication during a combined-arms breach. The commander should use these systems in conjunction with a robust set of phaseline triggers that allow him to track progress throughout the operation through the location of icons populated over the system.

Furthermore, frequency-modulation (FM) retransmission must provide coverage throughout the breach. The KTO terrain dictates the use and placement of a retransmission site. Battalion planners must assume restricted terrain requires FM retransmission to ensure consistent coverage.

Synchronization through thorough planning is critical for a successful breach, especially with partnered forces. Simplicity and rehearsals reduce friction when working with partner forces. A breach TF must conduct at least one combined rehearsal on a good terrain model. This rehearsal allows all leaders to execute their mission on the terrain model and deconflict phaseline triggers. The 1-77 Armor conducted full-dress rehearsals on the actual terrain where the breach was executed. This opportunity proved valuable and provided more repetitions, but it will likely not be available in a real-world combat situation.

A good technique the TF could use in an actual combat situation is to conduct dress rehearsals in the terrain near the tactical-area assembly. This practice allows the TF to identify possible mechanical issues with breach assets and allow the crews to visualize the maneuver restrictions caused by the terrain where they are operating. It also allows leaders to identify well-planned target-reference points to prevent fratricide.

Tools such as graphic-control measures and an exercise checklist (EXCHECK) foster synchronization by identifying conditions and triggers for each action in the breach operation. For example, the transition from reduction to the assault phase of the operation, especially with partner forces, requires synchronization to avoid fratricide. In the case of a deliberate breach, the most important tool a commander can use to promote synchronization is a robust set of phaselines on shared graphics. These graphics allow elements to initiate triggers from phaselines and provide command-and-control at all echelons. By using phaselines as triggers, the maneuver commander maintains situational awareness of where the breach force is located in the breach, even with degraded FM communications. Furthermore, the commander can use predetermined graphic-control measures to ensure each element involved in the breach is where it needs to be, when it needs to be there.

Maneuvering forces to the correct position at the ideal time requires the commander to conduct time and space analysis. This time and space analysis determines how close in time and space an assault force must be to the point of breach. Too close and the enemy can fix the assault force. Too far away and the force loses tempo. Phaselines and triggers allow the commander to apply time and space analysis and ensure there is a shared understanding by the maneuver elements.

Also, a thorough but simple EXCHECK is a very important tool to use during breach operations. The key to a good EXCHECK, however, is simplicity. An EXCHECK does not require pro-words for every trigger. A complicated EXCHECK makes it difficult for all involved in the breach to remember and understand each trigger and action. A clear and concise EXCHECK promotes synchronization by allowing each element on the battlefield to track the progress of the operation based on a simple pro-word.

Breach TF commanders must use a variety of techniques to implement mission command and foster synchronization among elements within the TF. Providing clear commander's intent to all elements allows units to maintain the tempo of a breach operation despite degraded communication capabilities. Using redundant communications systems such as JCR/JBCP, FM and retransmission sites helps mitigate common communication issues that units experience in the KTO. Implementing rehearsals, especially full-dress rehearsals, during the planning process promotes a shared understanding among partnered forces. Finally, tools such as graphic-control measures and EXCHECKs synchronize elements on the battlefield by identifying triggers and actions as they relate to time and space.

The breach TF must seize terrain to provide maneuver space for the task force as it commits companies to execute breaching operations. This terrain provides a holding area short of the breaching area of operations for the task force to support the breaching forces. This area provides the follow-on assault force, reserve forces, battalion-support nodes and command posts a secure area in which to remain during the breach's execution. It might be a non-continuous area. Planning for security in this area is necessary unless another organization is responsible for that task. The TF must maintain communications across the formation to allow the call-forward of the assault and reserve forces.

Assets, actions at point of breach

The 1-77 Armor's combined-breach training events yielded important lessons-learned regarding the commitment of assets at the point of breach. For example, the Assault Breacher Vehicle (ABV) should not proof the lane, but an asset attached to a tank from the breach platoon should be used. This decision allowed fewer engineer assets to be dedicated to the breach. Using an ABV with a plow to set off the mine-clearing line charge and thus clear mines, and then having the lane proofed by an M1A2 asset, allowed the ABV to later focus on the anti-vehicular ditch (AVD) and begin reduction of the secondary obstacle. This allowed the commander to dedicate the more heavily armored, more reliable ABV to reduce the AVD, as opposed to the lighter Armored Combat Earthmover.

Furthermore, during the reduction phase, an Armored Vehicle Launched Bridge was not the best choice for an AVD breach. The spoil height on the far side of the ditch made it unfeasible for a M1A2 with mounted plow to cross the bridging asset without either damage to the bridge or without becoming stuck on the far side due to the inclines encountered. Alternatively, the ABV with a plow effectively filled in and breached the AVD.

Another reason why the M1A2 with plow should proof the lane is that once at the leading edge of the AVD, the crew identified targets on the far side of the breach using the Commander's Integrated Thermal Viewer or Common Remotely Operated Weapon System. This situational awareness allowed the tank crew to call for fire on enemy battle positions on the far side of the breach and engage targets with direct fire from the tank commander's .50-caliber machinegun while proofing the lane. The tank crew's ability to continue to engage the enemy became especially important when the effects of obscuration began to wane due to degrading weather conditions and the amount of time required to reduce the AVD. With the M1A2 abreast of the reduction asset, TF 1-77 Armor's breach force provided increased security and covering fires for the engineers' reduction asset.



Figure 2. M1A2 tanks from A/1-77 Armor and breaching assets from 2 BEB pass through a proofed lane during a combined-arms breaching exercise May 9, 2019, at Rodriguez Live-Fire Complex, RoK. The exercise incorporated elements from 1-77 Armor, 2 BEB, 11th Engineers and units from the RoK. (Photo by SGT Alon Humphreys, 3rd ABCT, 1st Armored Division)

Other than the infantry company's clearance of the deadspace leading to the obstacle, reducing the AVD was the most time-consuming period in the operation. This period presented the highest risk to mission for a successful breach.

A major contingency that TF 1-77 identified during training was how to recover disabled vehicles in the breach lane. This contingency becomes more challenging in the KTO due to terrain restrictions. More often than not, the terrain does not facilitate the breach task force's establishing two simultaneous breach lanes. Also, it is possible that there is not enough space to create a second breach lane. Therefore establishing tactics, techniques and procedures for how to deal with a disabled vehicle can be the difference between a successful or unsuccessful breach.

The TF commander can mitigate risk and continue operations by bypassing any disabled breach assets within the breach lane. Having heavy breach assets such as a plow or a roller with the breach platoon complicates recovery operations.

Recovering a vehicle that has a plow or roller provides additional challenges. Although recovery with a tow bar may be the preferred method, the recommendation is that the towing tank use tow cables, which allows faster recovery. Rehearsal of contingency operations with multiple courses of action will build flexibility into any breach operation and ensure the rapid transition to the breach's assault phase.

As TF 1-77 Armor planned and executed combined-arms breach training in the KTO, this yielded lessons-learned that any unit conducting similar operations on the Korean peninsula should consider:

- When a battalion breach TF commander task-organizes his unit for a breach, sometimes "less is more." Using a company-size breach force for a single point of breach helps mitigate congestion in condensed terrain while maintaining the effectiveness of the TF's maneuver elements.
- Augmenting mounted forces with dismounted infantry helps mitigate risk posed by dismounted anti-tank weapon systems covered and concealed within the severely restricted terrain.
- Mission command and synchronization during both planning and execution are critical to the success of any breach operation, especially those conducted with partnered forces.
- Clear commander's intent helps ensure that subordinate units can maintain the tempo of a breach operation despite degraded communications with the TF commander.
- Redundant means of communication help mitigate the likelihood of degraded signal capabilities in the first place.
- A thorough rehearsal, as well as the use of graphic-control measures and EXCHECKs, synchronizes elements across the battlefield by creating a shared understanding of triggers and actions in time and space.
- Using the ABV to breach the AVD and an M1A2 with a plow to proof the lane helps ensure that the commander retains flexibility by keeping at least one reduction asset in reserve. Furthermore, it allows the tank crew proofing the lane to continue engaging enemy on the far side of the breach.
- Finally, the breach task force commander needs to consider the real-world contingency of a disabled breach vehicle in the breach lane.

Armored brigade combat teams (ABCTs) preparing for and conducting training in the RoK should apply these lessons-learned to increase lethality and ensure readiness for operations in the KTO.

LTC Mark McClellan commands 1st Battalion, 77th Armored Regiment, 3rd ABCT, 1st Armored Division, Fort Bliss, TX. Previous assignments include executive officer and chief of the Commandant's Initiatives Group, U.S. Army Armor School, Maneuver Center of Excellence, Fort Benning, GA; brigade combat team S-3 and executive officer, 3rd ABCT, 4th Infantry Division, Fort Carson, CO; combined-arms battalion executive officer, 1-8 Infantry, 3rd ABCT, 4th Infantry Division, Fort Carson; and tank-company commander, 4-64 Armor, 4th ABCT, 3rd Infantry Division, Fort Stewart, GA. LTC McClellan's military schooling includes Armor Officer Basic Course, Infantry Captain's Career Course and Command and General Staff Officer's Course, Command and General Staff College. He holds a bachelor's of science degree in military history from the U.S. Military Academy (USMA) and a master's of business administration in defense supply-chain management from Naval Postgraduate School. His awards include the Bronze Star Medal with four oak-leaf clusters (OLCs) and the Meritorious Service Medal with four OLCs.

CPT Chris Mathews commands Company A, 1-77 Armor, 3rd ABCT, 1st Armored Division, Fort Bliss. Previous assignments include S-4, 1-77 Armor, Fort Bliss; training and exercise officer, G-37 Training and Exercise Directorate, Headquarters U.S. Army Europe, Wiesbaden, Germany; executive officer, Headquarters and

Headquarters Troop, 3-7 Cavalry, 2nd ABCT, 3rd Infantry Division, Fort Stewart; and executive officer, Troop B, 3-7 Cavalry, 2nd ABCT, 3rd Infantry Division, Fort Stewart. CPT Mathews' military schooling includes Stryker Leader's Course, Cavalry Leader's Course (CLC), Maneuver Captain's Career Course (MCCC), Army Reconnaissance Course (ARC) and Armor Basic Officer Leader's Course (ABOLC). He holds a bachelor's of science degree in health science from Brigham Young University-Idaho.

CPT Sean Rabbitt is assistant operations officer for 1-77 Armor, 3rd ABCT, 1st Armored Division, Fort Bliss. Previous assignments include assistant professor of military science, Alcorn State University; executive officer, Troop B, 3-89 Cavalry, 3rd Brigade, 10th Mountain, Fort Polk, LA; platoon leader, Troop C, 3-89 Cav, 3/10 Mountain, Fort Polk; and squadron adjutant, 3-89 Cav, 3/10 Mountain, Fort Polk. CPT Rabbitt's military schooling includes ABOLC, ARC, MCCC, CLC and Maneuver Leader's Maintenance Course. He holds a bachelor's of arts degree in political science from John Carroll University and a master's of arts degree in higher-education administration from University of Louisville. His awards and honors include the Bronze Star Medal and Combat Action Badge.

1LT Lynn McCrum is the task-force engineer, 1-77 Armor, 3rd ABCT, 1st Armored Division, Fort Bliss. Previous assignments include platoon leader, Bravo Company, BEB, 2nd Engineers, Fort Bliss; and reconnaissance officer, 2 BEB, Fort Bliss. 1LT McCrum's military schooling includes Air Assault School and Engineer Basic Officer Leader's Course. 1LT McCrum holds a bachelor's of arts degree in civil engineering from USMA.

1LT Roman Burke is the tank-platoon leader, Company A, 1-77 Armor, 3rd ABCT, 1st Armored Division, Fort Bliss. Previous assignments include plans officer for 1-77 Armor. 1LT Burke's military schooling includes ABOLC and ARC. 1LT Burke holds a bachelor's of science degree in criminal justice from Dixie State University.

Acronym Quick-Scan

ABCT – armored brigade combat team
ABOLC – Army Basic Officer Leader's Course
ABV – Assault Breacher Vehicle
ARC – Army Reconnaissance Course
AVD – anti-vehicular ditch
BEB – brigade engineer battalion
BFV – Bradley Fighting Vehicle
CLC – Cavalry Leader's Course
CTE – culminating training event
EXCHECK – exercise checklist
FM – frequency modulation
JBCP – Joint Battle Command Platform
JCR – Joint Capabilities Release
KTO – Korean Theater of Operations
LoA – limit of advance
MCCC – Maneuver Captain's Career Course
NTC – National Training Center
OLC – oak-leaf cluster
RoK – Republic of Korea
RoKA – Republic of Korea army
SBF – support-by-fire
TF – task force
USMA – U.S. Military Academy