

BAPTISM BY FIRE

*One Lieutenant
Colonel's
Conversion to
Digital Battle
Command*



Photo by Sergeant First Class David Dismukes

LIEUTENANT COLONEL JOHN W. CHARLTON

I had 13 separate map sheets in the bustle rack of my Bradley when I crossed the Line of Departure (LD) into Iraq. Each was specially cut and numbered so that my Task Force operational graphics lined up correctly on the map. I had the current map sheet on my 18-by-24 inch map board while the extra map sheets were stored away in a map case. When I reached the end of a particular map case, I had to take the map board apart, pull the adjacent map sheet out of the map case (hence the numbering system), and attach the new map to the map board. Invariably, these map changes usually happened on the move and at night. My driver and I spent nearly two days cutting, aligning, and marking these map sheets prior to the start of the war. Leaders everywhere were doing the same drill. We were using 1:100,000 scale map sheets for the operation. When you have to travel over 700 kilometers, you make some sacrifices in detail to limit the number of map sheets you have to carry. We compensated for the lack of detailed maps by using imagery and engineer terrain team products.

Sometimes I had to juggle both my map board and the imagery at the same time such as when we began our attack into Talil Airfield on the first day of the war. We had crossed about 200 kilometers of open desert enroute to our objective and then attacked right into a dense urban environment. I was using the 1:100,000 scale maps for the long approach march and imagery for the actual attack. Since it was a night attack, I was also trying to maintain control of a small flashlight so I could see all these battle command aids.

What I should have spent the entire time focusing on was the small screen attached to my COAX door. It had been accurately tracking my location as well as the location of my key leaders and adjacent units the whole time. It had a database of maps of various

scales and satellite imagery for all of Iraq. Of course, I'm describing the Force XXI Battle Command Brigade and Battalion (FBCB2) system. 3rd Infantry Division (Mechanized) received a less sophisticated version called the BLUEFOR tracking system. It didn't have all the refinements of the full FBCB2 suite, but it did offer basic messaging and situational awareness capabilities. Contractors installed the systems in key leader vehicles throughout the division. They also gave us crash courses on how to use the system.

So why wasn't I using the system that much on the first attack of the war? The answer is simple: confidence. I had only received a short burst of training on the system and had never really put it to the test. I knew how to use it but did not have enough experience with this new battle command system to give me the confidence to rely on it in combat. As a result, I fell back on my "Old School" battle command techniques of juggling maps in the turret of a Bradley. I didn't completely ignore the new system ... I just didn't fight with it. I managed to make it through the first couple days of combat using my trusty map sheets but little did I know that my days of relying on paper map products were about to come to an end. My own personal transformation to digital battle command would come

during our operations in a little Iraqi hotspot called As Samawa.

Task Force 1-15 Infantry initially wasn't supposed to fight in As Samawa. We were headed northwest to linkup with 2nd Brigade Combat Team south of Karbala. However, shortly after we began our movement west, I received a fragmentary order to move to As Samawa and relieve 3/7 Cavalry. Our mission was to isolate As Samawa from the V Corps main supply route to the south. Saddam Fedayeen forces had infested As Samawa and were a tremendous threat to logistics units moving along the supply route. The problem was that I didn't have any imagery of the town since we hadn't planned on fighting there. This meant we had to use our 1:100,000 scale maps to produce operational

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graphics. The graphics were almost useless since the maps showed virtually no detail of the As Samawa urban area. Fortunately, one of my company commanders was getting pretty skilled at using the FBCB2 graphics feature, and he transferred my acetate graphics to digits. What an amazing difference it made. We could switch map scales and even use digital imagery allowing us to see every street in the town in relation to our graphic control measures. We used the Mission Data Loader (MDL) to transfer the graphics to every system in the Task Force, and we were ready to go.

Even though I was impressed with the abilities of the FBCB2 system, I still wasn't confident enough to go fully digital - I was still fighting off my map board. My complete conversion to digital battle command would not come until the infamous sandstorm of March 23, 2003. We were conducting a reconnaissance in force to find and destroy Saddam Fedayeen forces. I was planning on using the sandstorm as cover for our movement, and we planned to use railroad tracks as a handrail to guide us into our positions. I had two scout sections along to provide surveillance on the objective. Both company commanders and the scouts had FBCB2 as did my track. We were all using FBCB2 1:50,000 scale maps to track our movement since the sandstorm created "zero visibility" conditions. We were literally moving by dead reckoning through the sandstorm, using the FBCB2 system.

We ran into problems about halfway through the movement when we tried to navigate around the As Samawa train station. Even the 1:50,000 maps did not show all the details of the train station. Vehicles were getting stuck on the converging tracks and had to maneuver around several buildings that weren't identified on the maps. The sandstorm made it impossible to see our surroundings and we had several breaks in contact. One of the company commanders suggested we all switch from maps to imagery and would then be able to see the details of the train station and help us get around it. We were literally maneuvering by instruments like pilots do in bad weather but the imagery and GPS functions of the FBCB2 system allowed us to bypass the train station in the middle of a sandstorm. The experience of being forced to use and rely on FBCB2 during a combat mission under impossible weather conditions completed my conversion to digital battle command. I never used another paper map product for the rest of the war and fought every fight thereafter using FBCB2.

Digital Battle Command: What Works Well

FBCB2 has revolutionized tactical battle command in many ways. I've already mentioned the digital maps and imagery as being a tremendous capability. I literally had the entire countries of Kuwait and Iraq at my fingertips. I could pan across the maps, zoom in,

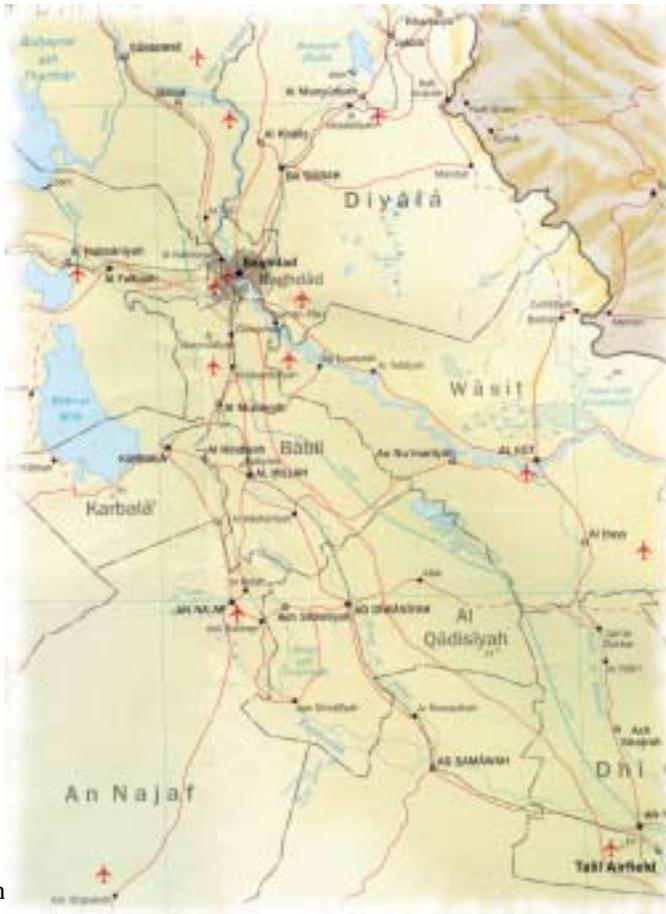
change to imagery (and zoom in on the imagery too), change scale, and even change the color of the grid lines on the map (actually a very handy feature). I didn't have to worry about changing map sheets — the screen updated as I moved. I didn't need a flashlight to read the maps and imagery since the screen had an adjustable backlight. The FBCB2 imagery wasn't quite as clear as a hard copy product but it was definitely suitable for every mission we executed. It enabled us to navigate through the narrow streets and alleys of Baghdad or determine if a canal road was suitable for tracked vehicle movement. I relied solely on FBCB2 imagery for all urban operations. If I had to pick the single best thing about FBCB2, it would be the maps and imagery capabilities.

Even though I had a limited number of systems in my Task Force,

FBCB2 greatly improved my ability to battle track friendly units and improve my overall situational awareness. I not only knew where my scouts and company commanders were; I also knew the location of all adjacent units and command posts. This greatly facilitated linkups. I didn't have to call and get a location of a company commander. I could see his icon on the screen and FBCB2 would guide me to his location. I am certain that FBCB2 battle tracking capabilities were instrumental in preventing fratricide. This was particularly important in urban areas where friendly units frequently converged and were often masked by buildings and other structures. Finally, FBCB2 allowed me to track the progress of the battle and know if things were going according to plan. When my Task Force seized a key highway intersection south of Baghdad, I could see the company commander icons at each blocking position and I knew we had control of the objective. That cut down on

a lot of radio traffic and allowed leaders to concentrate on the fight instead of giving frequent situation reports.

Shortly after arriving at As Samawa, my Task Force received the mission to send a company-sized force to seize a piece of terrain to the west and establish blocking positions. The mission was similar to the one the Task Force was given in As Samawa: isolate the built-up area and protect the V Corps supply route to the south. I had four companies (two armor and two mechanized infantry) so the loss of combat power would not degrade my operations in As Samawa. The problem was that the company's objective was seventy kilometers west of As Samawa. There would be no way to communicate with my separated company using our organic FM radios. Even using a RETRANS station, the distance was too far (FM radios were typically good for about 10–20 kilometers during the war). The company Enlisted Tactical Air Controller had satellite communications but that could only be used for controlling close



air support and for emergency medical evacuations. The only way I could maintain daily communications with the company was through FBCB2. Because the FBCB2 system we were using was all satellite based, ground distance was not an issue and I was able to send and receive text messages with my separated company. The Task Force was eventually pulled off As Samawa, and we moved about 200 kilometers to link up with 2nd BCT south of Karbala. I still had a company securing the separate objective but we were able to maintain continuous communication and FBCB2 allowed them to later linkup with us south of Karbala. The entire separate company mission simply would not have been possible without the satellite communication capabilities of FBCB2.

The Road to Digital Battle Command

This article has discussed the FBCB2 system and its employment in combat. In the course of our operations, we identified some potentially useful improvements that could be made to the system, but these are better addressed in another forum, lest we reveal potential vulnerabilities in an unclassified medium. FBCB2's capabilities were decisive during combat operations in Iraq. Never before have ground commanders been able to navigate, maintain situational awareness, and communicate to the degree they could using FBCB2 during Operation Iraqi Freedom. This was the first time the system was used on a large scale in combat and it was a huge success. FBCB2 helped prevent fratricide and enabled U.S. commanders to conduct operations at a much more rapid pace than the enemy. I simply never want to go into combat without FBCB2 — it's that good.

The real purpose of this article is to provide feedback on the advantages of using a digital battle command system in combat. This issue goes beyond the context of a particular machine or system. The compelling issue is that the Army and Department of Defense



Courtesy photos

LTC John W. Charlton briefs reporters south of Baghdad using satellite imagery. "Hard copy" imagery allowed leaders to identify the details of urban areas but was large and bulky. FBCB2 contained digital imagery for the entire country of Iraq and was more practical and easier to fight with.

need to increase the funding and fielding priorities for digital battle command systems. I would include Intelligence, Surveillance, and Reconnaissance (ISR) systems in the top priority category as well but we'll stick to digital battle command systems for now. Simply put, we need to convert our entire military to interconnected digital battle command systems. Every tank, helicopter, ship, supply truck, and command post should be equipped with some type of digital battle command system. Many of our mechanized tactical operations centers are still based on archaic M577s and modular tents. Every command post in the military must be mobile, survivable, interconnected, and digital. The real challenge will be providing digital battle command systems to dismounted infantry and special operations forces, but today's technology has solutions for them as well.

Digital battle command must be fully integrated into our doctrine and our institutional training. Officers and enlisted Soldiers should be trained at every level on these systems and how to use them to enhance planning and execution of military

operations. Our Army and Joint doctrine should be updated to exploit the capabilities of these new systems just like we update doctrine to exploit the capabilities of new weapon systems. Our training and doctrine should allow our Soldiers to master digital battle command systems so they aren't forced to convert to using it during combat like I did.

Maybe I didn't have enough training or didn't fully understand the full capabilities of the FBCB2 system and perhaps the "FBCB2 Lite" version that we were using pales in comparison with the real thing. All that is probably true, but misses the point. I fought in combat with a very good digital battle command system that had some minor problems and — based on my experience — I am convinced that digital battle command is the key to success in current and future conflicts. As we look at lessons learned from Operation Iraqi Freedom, we need to embrace digital battle command and recognize its importance in twenty-first century warfighting.



Command and control vehicles line up outside the Task Force 1-15 Infantry Tactical Operations Center in western Baghdad. One M577 contained FBCB2.

Lieutenant Colonel John W. Charlton is the commander of 1-15 Infantry, 3rd Infantry Division (Mechanized). His battalion recently returned from 13 months of training and combat operations in Kuwait and Iraq. Task Force 1-15 Infantry fought eight major engagements during 21 days of intense combat during Operation Iraqi Freedom and was the first U.S. unit to attack across the Euphrates River toward Baghdad. He has a master's degree in computer information systems and is a graduate of the Army's School of Advanced Military Studies.
