

# The Battle of Oom Chalouba

## 17 June 2008

by Lieutenant Colonel Mark P. Hertling

### 1537 hrs. Somewhere between N'Djamena and Chalouba.

*“A stroll in the park,” LTC Steve Cash muttered under his breath as he gazed at the IVIS-2A in the turret of his M1A3. All the vehicles and aircraft of his small strike force were moving toward Chalouba, and the display showed his unit spread out on a frontage of over 30 kilometers and a depth nearing 50 kilometers.*

*“Never ceases to amaze me,” Cash said aloud to his crew over the intercom. “When I was a young buck, we moved in a desert wedge. We could see our wingman — hell, we could see everyone in the whole battalion. There was a safety in numbers; having everyone within sight was like wrappin’ a big blanket around you and goin’ to meet the bad guys. But there’s somethin’ about this, too. Distance, the ability to mass and then spread out again, never providing a target. Especially knowing where everyone is — little chance of fratricide.”*

*“Yessir, I like this just fine,” interrupted SPC Jim Ross from his loader’s position. “I can see all I want just by glancin’ over to ole’ Mac.”*

“Ole Mac” was what soldiers had affectionately nicknamed the device that had revolutionized the Army of the 21st Century. Doctrine, tactics, leader development — even unit organizations — had all changed because of the user-friendly computer officially known as the IVIS-2A. And while LTC Steve Cash had predicted much of what was happening now, he still found himself amazed at being the beneficiary of all the advantages this small device provided. Eighteen years earlier, Cash had reported to his first unit straight out of the Armor Officer Basic Course. He was cocky, anxious to taste some of the famous German beer he had always heard so much about, and ready to learn how to be a tanker. Exactly three days after reporting, his learn-

ing curve became very steep indeed. His battalion would deploy from the rolling hills of Bavaria to the flat desert of Southwest Asia.

Cash did fine as a platoon leader. Prior to combat, he developed a strong sense of teamwork in his platoon. His soldiers saw him as a strict but fair leader, and his NCOs willingly taught him all they could in the short period they had before crossing the berm. His superiors saw in him a tactical and leadership savvy that few of the more experienced lieutenants had. Then in battle, he also performed well. He kept his cool on the radio and even personally knocked off two T-72s and a BMP during one of the night fights. He wound up doing more in his first three months of active duty than many Armor officers do in a lifetime. In the summer of 1994, Cash headed to the Armor Officer Advance Course.

He knew the profession of arms was for him, and he knew he wanted to be the best tank company commander in the Army. He also reported with some strong prejudices about training, organizing for combat, and commanding soldiers on the modern battlefield.

Cash met his duplex neighbor, CPT Frank Rice, the day he signed for quarters. Rice worked at a place called the Battlespace Battle Lab, and over beer together on a hot July afternoon, Cash first heard the terms “digitized battlefield” and “information age.”

Both became fast friends. They kidded each other that as a team they would go far because Rice had the vision, Cash had the battlefield experience. They spent many late summer afternoons in the back yard, watching their small children in the rubber wading pool, drinking Coronas, and exchanging ideas about the potential nature of warfare in the 21st Century. Life was good. As part of an Advance Course assignment, Cash used his conversations with Rice to piece together a thought piece. In that paper, Cash used

three battles — Hastings, Gettysburg, and 73 Easting — as a means of forwarding a hypothesis — that throughout history, regimental-level commanders primarily needed to focus on three major areas when preparing for combat. They must train themselves on how to properly maneuver compact forces on the battlefield, they must train their soldiers to engage and destroy the enemy with the weapons at their disposal, and they must determine the best ways to protect their force before and during the battle. While the historical portion of their study was interesting, it was the conclusions about the demands of the future that received attention by the Advance Course Instructor and the rest of the Armor community.

The article posited that in information age warfare, regimental (re: battalion) commanders would be faced with many demands for which they might not be ready. Specifically, forces on future battlefields would no longer be in formation; rather, individual vehicles and soldiers would be dispersed and would act independently. Battalion commanders would need to control all four dimensions of the battlefield like never before; this would require a much stronger combined arms force at the lower echelons. Additionally, to understand the microchip technology inherent to their equipment, soldier training would necessarily be grounded in concepts; it was more technical and extremely intense. Finally, the commander would need to ensure all members of the force had a common view of the battlefield. Cash made it clear that this meant more than the regurgitation of the specifics found in the five paragraphs of an operations order. Hard information and generated data had to be passed to and understood by every soldier, as well as every subordinate leader in the force.

It appeared to the young author that the information age would require monumental changes in the training, leader development, organizational and doc-

trinal realms of the Army before the advanced technologies — corporations of the day were already using many of them — were fully incorporated into the fighting force. In the years between 1995 and 2008, that is exactly what happened.

### 1615 hrs. The Support Cell.

Major Mike Lloyd watched from the steps of the C<sup>2</sup>V as SGT Leon Moss brought the Pegasus back behind his head, then threw it forward like a child throwing a paper airplane. When it was eight feet above the ground, the engine of the UAV kicked in and a small red light appeared behind the tail, indicating the daylight TV camera was on. It headed northeast toward the objective.

*“That’s one small launch for me, one giant launch for the strike force,” SGT Moss said as he gave the thumbs up sign to his support cell chief. Lloyd didn’t even try to suppress his laughter as he turned and headed back into the vehicle.*

*Inside, Lloyd continued to grin as he watched the soldiers in the vehicle work their magic.*

*SSG Mike Smith was on duty as the T.O. (tactical operator) in the first chair. In front of him were two monitors, the Digital Terrain Analyzer (DTA), which was turned off, and the large IVIS-2B monitor, showing each of the vehicles and aircraft in the strike force. Lloyd found the icon which represented LTC Cash’s vehicle before he turned away; it was one of those things soldiers do for luck... it meant the ole man is still out there, leading the way.*

*In the second chair was SFC Aaron Pierce, SGT Moss’s partner on the intel gathering team. In front of this position was a computer monitor that was currently processing some information just received from the J-STARS downlink. Pierce was temporarily ignoring that roll-up while he did the initial pre-aerial tests on Pegasus, pushing a trigger on the flight joystick, ensuring the grid targeting device on both the daylight and thermal cameras was working.*

*SFC Brimmage was working a request that had just come into his LM (logistics management) station at the last chair. One of the aviators needed a new Nomex suit at the next fuel rendezvous point. “Yeah, okay,” Brimmage muttered to the monitor as he transferred*



*the request to the vehicle that would deliver, “L.L. Brimmage never lets you down.” Lloyd always called Brimmage the LM, but all others in the cell continued to use the old Army term of “loggie” when referring to this extremely professional and competent NCO. Brimmage knew his business, and he never let a request or monitored (the term used to describe a sensor detecting a shortcoming in one of the forces’ vehicles) go unnoticed. It didn’t matter what they called him, he knew his job.*

*The C<sup>2</sup>V was relatively quiet — no incoming calls right now. The support cell crew would only use the voice cellular radio when they needed to receive the true emotions that accompanied reports or requests. The rest of the time they relied on data-burst technology. The habitual exception was Lloyd’s periodic chat with LTC Cash... Lloyd admitted it was unnecessary, but he needed to hear someone say everything was going okay out there.*

*“SSG Smith, do a terrain analysis of the area just west of the objective,” Lloyd said to the T.O. “I got a feeling we’ll be sending someone into that rocky area.”*

The support cell was the brain behind the strike force’s brawn. With the support cell staff making up only a small percentage of the force, the chief could do all the things — and more — that much larger staffs had done from the time of Napoleon until the late 1990s. While the other half of the cell slept, this four-soldier team gathered, evaluated, and disseminated the intelligence, helped the commander control the maneuver of the force, and kept a watch-

ful eye on, as well as predicted, the logistical demands of the unit.

Major Lloyd was the only other field grade officer in the strike force besides LTC Cash, and he had the important job of managing the people, hardware, and software that helped the commander make decisions. He liked his job, he especially liked the team he had put together, and he was constantly fascinated by all the equipment that was part of this command and control vehicle.

For example, the IVIS-2B, like its counterpart IVIS-2A found on all tactical and support vehicles, helped the commander control the maneuver of the strike force. On its screen were greenish-blue icons representing all the vehicles and aircraft under LTC Cash’s command. When hard intel on enemy vehicles or capabilities became known, red icons or graphics were also superimposed. Lloyd’s and the T.O.’s watchful eyes on the -2B provided backup for what either the commander or any other vehicle might not see on their individual IVIS screen.

Then there was the DTA. Growing up, Lloyd had been a Nintendo junky, but even the best video game could never have prepared him for his first introduction to the Digital Terrain Analyzer. That small piece of equipment and its accompanying weightless headset gave the T.O. (and Lloyd, when necessary) the ability to “see” battlegrounds before the strike force rolled over or onto them.

SSG Smith loved it when the chief gave him the task of doing a “T.A.” of a potential maneuver area. Smith

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would give up command of the boring IVIS screen to Lloyd, place the DTA headset over his eyes, dial up the mapped area from the most recent satellite geographic scan, and then conduct a virtual reality search of the maneuver tract. From that probe, the T.O. could “see” the terrain — and the dangers that might be presented by an enemy force occupying that terrain — formed from a digitized three-dimensional representation of a recent satellite photo. As a young captain, Lloyd had worked on the testing of the DTA project at the National Training Center. It had provided a unique advantage over the OPFOR.

The tactical operator relied on the intel gatherer (I.G.) at station two to help synchronize the maneuver of the strike force. The I.G. received direct feeds from myriad sources — from tactical Air Force platforms to strategic satellites — and relevant video and scripted information. He immediately examined them on the primary monitor and shared the information with the T.O. Additionally, the secondary screen at the I.G.’s station provided the link to Pegasus. While the images from the UAV were the primary source of video intelligence, on occasion SFC Pierce would bring up gun camera views from the force’s helicopters. Cross-talk was continual, and the ops-intel interface could not have been better.

At the far end of the C<sup>2</sup>V, at station three, sat the L.M. The uniqueness of the U.S. Army’s approach to logistics in the information age could be found in the equipment located at this position of the support cell. With the goal of total asset visibility, the combat service support community had developed an exotic and brilliant system of proactive supply management in the waning days of the 20th Century which it was now putting to good use.

Strategically emplaced sensors on each piece of tactical equipment made the concept work. Several small microchips repeatedly transferred information, ranging from fuel and onboard ammo status to the condition of various internal engine components, for every vehicle in the unit. Using the single monitor at his position, SFC Brimmage could oversee the logistical health of the command. When a “monitor-red” condition occurred — that is, when a part was wearing out of tolerance or a vehicle reached a certain fuel or lubri-

cation level — the L.M. would dispatch support to the element in need.

In addition to the onboard sensors, every soldier’s ID card — fed through the sensor scan at the bottom of the IVIS when the soldier was assigned to and deployed with a particular vehicle — provided needed personal information to the L.M. Whether it was the size of a new Nomex needed by an aviator or a pint of the right type of blood for a driver on the AFAS artillery piece in Strike Team Alpha, the logistics manager could deliver it based on the information feed he received directly to his monitor from each soldier and vehicle in the force.

The soldiers of the small support cell were a proud lot. Fighters were important in any army, but in the information age those who worked the data and contributed to the commander’s wisdom from the support cell were critical members of the team.

### **1727 hrs. In the cab of L-21 (a Fuel-Pallitized Load System HEMTT)**

*SPC Kellie Reese was daydreaming as she rolled across the grassy plain. She was remembering her father’s visit back before the deployment. CSM (retired) Daniel Reese had always been very proud of his daughter; but he seemed especially so as she showed him around and introduced him to all her friends. She was in a high-speed, high-tech unit, and the old sergeant major was duly impressed.*

*“I can’t believe how much electronic gear is in a fuel truck,” CSM Reese had commented the day SPC Reese had snuck him into the motor pool and showed him the HEMTT, her name proudly stenciled on the windshield.*

*“You take care of this stuff; Kellie,” her father advised. “It might save your ass some day.”*

The “electronic gear,” as her father had called the tactical displays and the telepresence package in the cab of her vehicle, had already done just that on several occasions. During one particular episode, Reese was on her way to deliver fuel to a Comanche in Strike Team Bravo when she received a warning from the T.O. There were annoyance mines and an unconfirmed enemy rocket team along the path she was taking to the helicopter, said the message across the bottom of her IVIS-2A

screen. On the map above the message, the support cell had conveniently plotted new way points for her to follow so she could accomplish her mission. As she circumvented the location, she saw friendly artillery striking the area she had been heading for, eliminating the hazards identified just a few minutes earlier.

The incorporation of all this advanced technology in support vehicles had occurred as a matter of necessity over the previous decade. In the evolving operational doctrine — the latest version of FM 100-5 was published in 2005 — combat service and service supporters were told they needed to operate as independently and with as much agility as their sister combat forces. Long, lumbering fuel convoys and time-consuming LOGPACs could not be tolerated in the controlled-tempo operations of the information age.

As a result, emerging technologies were fielded in service and service support units. With those fieldings, Army leadership discovered spin-off economies and efficiencies. For example, by sending direct data-burst messages to independent vehicles that knew their precise cargo inventories and locations at all times, the Army had eliminated excessive stockage of the various classes of supplies once thought necessary to sustain extended combat operations. Articles were cross-leveled and classified on the various supply vehicles moving throughout the large strike force area of operations. When a specific part or supply item was needed by a particular vehicle, the LM could direct the logistics vehicle to a pinpoint position. With an electronic running status of the number and location of each stock on the individual supply vehicle, and a roll-up of the status of each vehicle at the LM, waste and excessive loads were precluded.

An interesting story surrounded the fielding of the other piece of “electronic gear” found on several of the re-supply vehicles. The telepresence robotic arm that was now such a fixture in refueling operations was actually developed way back in 1994 for use by army cardiac surgeons. Early experimentation showed combining video imagery with microchips embedded in distant and near robotic arms would allow doctors to view and even operate on patients that were far removed from the medical team. Environmental engineers latched onto this technology and

applied the same techniques and equipment to fuel-handling procedures. In training, the result was fewer POL spills and a cleaner environment. In combat, the speed with which a HEMTT could now provide needed fuel to a thirsty tank equalled the best Indianapolis 500 pit stop. All due to some forward thinking and the application of information age technology found telepresence robotics.

### **1855 hrs. The turret of A-23 (an M1A3 tank in the northwestern sector)**

*Irredentism. SFC Terry Brailsford had looked up the word in the dictionary right after he first saw it on a light show presentation at PLDC in 1997. The instructor had predicted it would be one of the many types of conflicts facing the Army in the 21st Century. Brailsford didn't know what it meant at the time, but now his force was deeply involved in that type of conflict. The current situation was somewhat confusing, but it all seemed to come down to helping a democratic nation retain newly found freedom against a group of thugs.*

*The battle that was raging less than ten kilometers from his location was the result of these irredentist conflicts. Brailsford watched it evolve on the small screen mounted in his cupola. He closely followed the artillery crosshair as it centered on each of the enemy vehicle icons that appeared on his screen. Pegasus was probably seeing the enemy and reporting pinpoint location to the support cell. He wasn't sure which strike force element was hitting the targets — the air or the field artillery — but one thing was certain: Some bad guys and some good guys were going to be left in that small urban area west of the objective. And eventually, since he and his crew were close, they were going to be sent there by their commander.*

The ability to “see” the enemy prior to an engagement was probably the most interesting result of the information age battlefield. Determining and then confirming where an enemy was and what he was doing — sometimes with video images transferred into icons, other times with virtual reality displays — was the primary advantage of being on the leading edge of information age technology.

Battles fought in this manner didn't last long. Once the enemy was found, it was relatively simple to bring a variety of lethal platforms into acquisition range and then present the enemy with a multitude of distasteful options. This had quickly become the hallmark maneuver of the U.S. Army. It was a new twist on the old targeting methodology: Detect, then decide, then deliver, then assess. Instead of the commander allocating intelligence resources which would attempt to detect enemy targets after he decided what he wanted to strike (as it was in the 20th Century fire support process), the commander could now make his decisions based on the knowledge of all that had already been detected. The switch was more than just a change in procedure, it was a difference in how the commander approached the demands of the battlefield.

Many reporters, who in nanoseconds were able to file their stories and photographs thousands of miles over the airwaves with cellular faxes and transponders, would often declare this type of fighting unfair. It was certainly that. But the political masters who gave the strike force the mission of calming the upheaval in this foreign land would only reply: “The competent and sound application of tactics — and new technologies — always results in an unfair fight. That is how we will continue to conduct our operations, for it allows us to save our soldiers' lives and win our wars.”

### **2231 hrs. On the objective, near the town of Chalouba**

*LTC Steve Cash leaned against the front slope of his tank as he talked on the cellular to MAJ Mike Lloyd back at the support cell. They had already discussed the success of the strike force and the potential follow-on missions. But Cash was still concerned about the western passages into their area of operations. If more of the enemy was foolish enough to enter the area across the plains, he wanted to be ready for them. The commander and his chief chatted for a few more minutes about the maneuver, and then Cash touched the “off” key and put the phone in its holder on his web vest.*

*In the 15 years since his attendance at the advance course, Cash had seen the Army go through an incredible change.*

*Many of the old black boot soldiers would even say it was a greater change than that which had transpired between the Vietnam War and Operation DESERT STORM. Cash didn't know about all that; he was just thankful there had been some leaders in this great Army who were visionaries and forward thinkers. Without them, the members of his small force would certainly not be the beneficiaries of this decisive battlefield victory on this hot, African day.*

*The impact of the information age was not just the technology found all around him. The microchip had influenced everything that was a part of this army. Doctrine, training, leader development, organizations, and the way soldiers approached each battlefield task were all altered by the power of the small post-industrial miracle. It had even begun to influence age-old war-fighting theory. The smart guys were now looking out over the next 15 years to determine what to call the blend of offensive and defensive operations that this information age had allowed them to create. Yes, it certainly was a revolution in military theory — but the smart guys at SAMS would have to figure all that out for the Army of 2020.*

*Cash looked up at his loader, manning the machine gun and looking toward the northwest. Old habits never die, he thought to himself. “Imagine,” thought Cash, “SPC Ross is actually thinking he might not get warning of an inbound enemy aircraft.” Cash smiled and shook his head as he climbed back onto his vehicle. It had been a long day.*

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