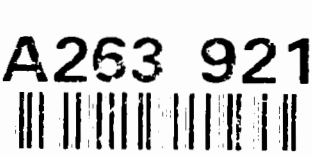

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THE 141ST SIGNAL BATTALION EXPERIENCE IN OPERATIONS DESERT SHIELD AND DESERT STORM: COMBAT WAS DIFFERENT FROM TRAINING AND DOCTRINE

BY

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The 141st Signal Battalion, 1st Armored Division, VII Corps, participated in Operations Desert Shield and Desert Storm, deploying from their forward location in Ansbach, Germany. The deployment created many unique challenges, which had never been considered in training. In addition, operations in the Southwest Asia theater were very different from those practiced in Europe. This monograph examines some of the most significant challenges that confronted the 141st, and focuses on issues where we fought differently than we trained or differently than doctrine stipulated. It will cover pre-deployment, deployment (including combat), and re-deployment phases, and will address topic areas of personnel, training, operations, logistics, and morale. It is not intended to be a comprehensive "lessons learned" document, rather a discussion of those issues the battalion commander considers the most important. Through these examinations, perhaps future doctrine, training, and planning factors can be more realistically developed.

USAWC MILITARY STUDIES PROGRAM PAPER

THE 141st SIGNAL BATTALION EXPERIENCE IN OPERATIONS DESERT SHIELD AND DESERT STORM: COMBAT WAS DIFFERENT FROM TRAINING AND DOCTRINE

A PERSONAL EXPERIENCE MONOGRAPH

by

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INTRODUCTION

My experience as a divisional signal battalion commander during Operations Desert Shield and Desert Storm revealed that while doctrine and existing training methodologies provided a basic foundation upon which to build, it took great flexibility and considerable departure from the way we trained to achieve success. Some changes were only to local policies, while others were to basic doctrine and training as taught at the grass roots level throughout the Army. Key issues included: Female soldier pregnancy and Dual Service Member impacts on deployment; lack of signal/communications understanding and education within the combat arms; doctrinal failure to address a fast-paced attack operation; doctrinal failure to provide initial in-theater communications; failure of logistic systems to provide critical spare parts/assemblages; doctrine vs. resources and training in providing for signal site defense; poor Army procurement practices in obtaining proper equipment (HMMWV vs. CUCV); failure of logistic systems to track shipment of equipment (MILVANs); the absence of medics in the divisional signal battalion TO&E; failure of the mail system; and compromise of integrity among senior leaders due to an attempt to keep certain emotional information "close-hold."

My experience in Operations Desert Shield and Desert Storm began in the unlikely location of Rosslare, Ireland, on 18 August 1990. As my family was coming to the end of a vacation in England, Scotland, and Ireland, we stopped in Rosslare the evening of 18 August. The 1st Armored Division (1AD) G-1, LTC

Mike Veasey, and his family arrived in Rosslare the same evening. Over a pint of the local brew, LTC Veasey told me that three of my battalion fuel handlers had been identified, along with others in the Division, for possible deployment to Southwest Asia (SWA) as augmentees for Desert Shield. The news of 1st Armored Division sending augmentees to SWA was the first indication we had that we would have any involvement at all in the operations - up until now, all U.S. forces were from Continental United States (CONUS) units. LTC Veasey told me that the reaction of the fuel handlers was not very positive, as they did not want to be separated from their battalions.

When I arrived back in Ansbach two days later, I immediately met with my Executive Officer, Company Commanders, and battalion staff to get a complete update. There were plenty of rumors regarding possible 1AD involvement, but no firm facts. Our first mission, therefore, was to learn what we could and dispel rumors. Since USAREUR plans were very close-hold, it was near impossible to get any information to give the soldiers and families. Anxiety ran high. The official 1AD position on information was that we would be informed when it was appropriate - not a very reassuring situation.

Our first indication that we would be involved as an entire Division came directly from the office of the Army Deputy Chief of Staff for Operations (DCSOPS) in the Pentagon. Our battalion S-3 began getting frequent calls from an action officer in the DCSOPS, inquiring into the Signal Battalion's status. The 141st

was in a stand-down status in order to field the new Mobile Subscriber Equipment (MSE). This modernization program was scheduled to last from November 1990 to May 1991. In fact, the battalion had already turned in some of its old equipment and the rest was inventoried, sealed, and relocated across town for imminent turn-in. The battalion's motor pools were absolutely bare, in preparation for the incoming MSE equipment and training facilities. In addition to the equipment, many of the soldiers who possessed the old Military Occupational Specialties (MOS), had already left on reassignment orders. The battalion was totally focused on MSE fielding, and nowhere near combat ready. The DCSOPS action officer told us that the ability of the 1AD to deploy to combat now rested on the ability of the Signal Battalion to become combat ready.

Faced with such a situation, we immediately reported the DCSOPS contact to the Commanding General of the Division, who was understandably upset that we were getting direct calls from the DCSOPS concerning matters of which we were not even supposed to be aware. He directed we tell the DCSOPS action officer to route all inquiries through the Division headquarters, which we did. This alleviated, but did not eliminate, such calls directly from the DCSOPS.

In November 1990, the announcement was formally made that VII Corps, and thus the 1AD, would be deploying to SWA for Desert Shield. The solution for the Signal Battalion was that we would stop MSE fielding and go back to our old generation equipment.

That left us in the unenviable position of having to try to reclaim all our equipment that had already been turned-in, and find soldiers who possessed the requisite MOS.

The 1AD began its deployment just prior to Christmas, and the 141st Signal Battalion was one of the first to go, departing on 21 and 24 December. We were soon to learn that we would fight differently than we trained, and differently than doctrine stipulated, in the areas of personnel, training, operations, and logistics. We also experienced morale factors never encountered during training.

PERSONNEL

The most emotional issues regarding the deployment came in the personnel arena. Our soldiers and families were mentally prepared for operations in Europe, but not ready for the further deployment to another theater.

Family Care Plans were now to be really tested, and we found several that were "on paper" only. Care providers who would watch children for short, one-week exercises in Germany, in some cases refused to provide care for an extended (no known end date) period. Some of the care plans were falsified from the start. As a result, USAREUR allowed sole parents and dual service families (both parents in deploying units) one trip back to CONUS to leave children with family or other care providers. Some soldiers did not believe they would have to deploy with the battalion if they had children for whom to care. During one

battalion predeployment assembly, an NCO asked who would have to deploy: he or his wife, who was also a soldier in the battalion. After the auditorium quieted, I told him both would deploy. The NCO chuckled and said, "No, really, sir, which one of us?" When I reiterated that both would, he was in shock. Invalid Family Care Plans resulted in several legal and administrative actions being taken against soldiers. Family Care Plans must transcend the training environment and be valid for long-term combat deployment.

The battalion experienced one conscientious objector (CO) and two desertion cases, situations not encountered during training in Germany. The CO was a young soldier who claimed his Muslim faith prevented him from killing his fellow Muslims in Iraq. A check with a Muslim cleric revealed that this was not true - in fact, the Muslim faith requires a member to be true to his obligations, and the soldier's sworn obligation as a soldier over-rode any personal reservations. Army policy dictated that after the deployment notification had been made, soldiers could not file for conscientious objector status until they arrived in SWA. We were legally prepared to physically drag this soldier onto the plane if necessary, but he boarded voluntarily, and filed for CO status upon arrival in Saudi Arabia.

The two deserters were a black male and white female who were dating prior to deployment. They deserted together and found haven with a German anti-war group that encouraged U.S. soldiers to desert, rather than fight, after the deployment order

had been made public in Germany. The 141st deployed without the two, as we could not find them. Upon return to Germany from SWA, the two soldiers were apprehended trying to illegally enter the United States. They were sent back to Germany to face desertion charges after their allegations of racial harassment were disproved. Once back in Germany, the soldiers again threw up an incredible smoke screen of racial allegations, sensing the emotional situation in Europe at that time (the NAACP president in Europe, an Air Force enlisted man, had just tried to violate orders on racial grounds, and racial issues were under close scrutiny in Europe). Once all the deserters' allegations were disproved, they admitted they deserted because they did not want to go to combat. They were both convicted in General Courts Martial, and sentenced to prison terms. The legal considerations involved in these cases were mind-boggling, and no-one in the chain of command had ever dealt with desertion cases pending combat deployment. Prior training in this potential problem area would have been most helpful.

Perhaps the most emotional personnel issue that arose was that of female soldier problems. Much has been debated lately regarding females in combat. The 141st experience in Desert Shield/Storm perhaps can shed some realistic light on the matter.

The battalion, one-quarter to one-third female population, usually had five or six soldiers pregnant at any given time. After rumors of deployment circulated, the battalion's pregnant population jumped to twenty-six.[1] It became well known that

pregnant soldiers could not be deployed, and there was an immediate movement among some female soldiers to try to get pregnant to avoid deployment. Proof for legal purposes was near impossible to establish and time consuming when the unit was feverishly preparing for movement. Even once the battalion arrived in SWA, several soldiers tested positive for pregnancy and had to be immediately returned to the rear detachment in Germany. This situation raised several issues: other (especially female) soldiers were incensed the pregnant soldiers got away with their scheme; wives of deployed soldiers were furious that their husbands had to remain in SWA, but the pregnant females got to return home; and all soldiers were angry that the pregnant females who returned to Germany were allowed to wear a combat patch on their right sleeve, and were awarded the Southwest Asia Service Medal, even though they had avoided combat and only served in Saudi Arabia for a few weeks. Even one of my best platoon leaders incurred the wrath of spouses in Germany when she returned prior to combat operations due to pregnancy. She was pregnant before the deployment order was released, but did not tell anyone because she wanted to lead her platoon in SWA. After much soul searching, she and her husband (also a lieutenant in the battalion) decided it would be best for her to return to Germany. Her honorable intentions were not appreciated by the spouses of the still deployed soldiers, but she proved to be a valuable addition to the rear detachment in Ansbach.

These issues raise a few remedies for the future.

Commanders at company or battalion level should be able to involuntarily discharge pregnant soldiers when it is clear their pregnancy is solely to avoid service (short of legal proof for disciplinary action). Commanders should also be able to deny the award of a combat unit patch for soldiers who, through pregnancy or other means, intentionally become nondeployable once in a combat theater, and deny the subsequent award of any service medals (e.g., Southwest Asia Service Medal).

After this discussion, it should be pointed out that the majority of female soldiers served in an outstanding manner. Female enlisted soldiers and NCOs were integral parts of the communications team and worked as hard as any of the men in accomplishing the mission. Four of my female officers distinguished themselves, reaping praise from combat commanders throughout the Division. Two of them were physically located at the combat brigades, and the two brigade commanders asked me if I had any more officers like them to work at their brigades.

Another issue involving females is that of sexual harassment. The battalion prosecuted one sexual harassment case against a company first sergeant, but that case was a carryover from his actions in Cermany before we deployed. There was no increase in sexual harassment incidents (at least reported cases) during Desert Shield/Storm.

Focusing on another personnel issue, Family Support Groups (FSG) were invaluable in caring for families left behind in Germany. During training exercises in Germany, the FSG were not

overly active; during Desert Storm, they would be truly tested. Since most of the families were not near their traditional family structures as were those in CONUS, the FSG became central in the daily lives of our families. The rear detachment worked with the separate company FSGs and the battalion FSG structure constantly, making families feel secure and informed. The results of the FSG comprise one of the major success stories for the battalion during Desert Shield/Storm, but the FSG requirements put extraordinary pressure on some of the key spouses who formed the "chain of concern". Most burdened were the spouses of the battalion command group and the company commanders. One wife had a nervous breakdown, another resorted to frequent use of alcohol, a third was on the verge of a breakdown. These spouses carried the majority of the daily problems of families, often at the expense of their own families. Many families had unrealistic demands of the FSGs, and none of the key people were able to "just say no". If there was one word that applied to the condition of the FSGs and key spouses, it was <u>stress</u>. In this regard, part of the official FSG program should teach key people how to deal with unrealistic demands of families and show them how to make individuals handle things for themselves where possible.

Referring back to an issue mentioned in the introduction, due to the exodus of personnel under MSE fielding, the battalion was only at 60% strength in several critical MOSs, such as switchboard operators, multichannel ("PCM") radio operators, and

radio teletype (RATT) operators. We did not get any replacements prior to deployment, so we were in bad shape upon arrival in SWA. After a few weeks in theater, the Division G-1 began to get replacements to fill our requirements. He was so successful that the battalion came up to full strength in a matter of weeks. Our worn out initial contingent was then able to begin some team training, which will be discussed later in this paper. Had the battalion been told to cease MSE fielding earlier, we would have been able to retain many of our previous key signal team members and deployed in a more combat ready status. The "close hold" mentality in Europe was very detrimental in this case, and Army "Stop Loss" policy was too late in implementation.

When deployment was announced in Europe, the battalion was in the midst of some key leadership changes in company commanders, platoon leaders, platoon sergeants, and battalion staff positions. The decision was made to task organize for combat, casting aside the usual assignment process. This proved to be one of the best decisions we could have made prior to deployment. The battalion command group, including the command sergeant major, matched abilities and personalities of platoon leaders with platoon sergeants to form effective teams. I allowed one company to change command as the incoming commander was stronger than his predecessor, but retained another company commander due to his unparalleled experience and expertise - combat did not allow us to take the traditional risks of "training up" new people in key positions. The best technical

experts were placed in the battalion operations section to engineer and maintain a Division communications system that had to be flawless in combat. New personnel were brought up gradually during the operations, and we experienced the best of both worlds: effective combat teams and effective integration of new personnel.

The last personnel issue to be discussed deals with the Time Phased Force Deployment (TPFD) process. In theory, soldiers are supposed to be deployed to arrive at the port of debarkation within a day or two of the arrival of their equipment. The battalion learned an important lesson upon arriving in Saudi Arabia: When the TPFD system breaks down, soldiers pay the price. The Initial Staging Area (ISA) at Al Jubayl quickly became overcrowded due to the unrestricted rush to get soldiers into the SWA theater, and the concurrent slow arrival of equipment in the port from Germany. Units that were supposed to have moved to the desert quickly had to remain in the ISA waiting for their equipment. With the overcrowding came jammed GP medium tents, poor sanitation (overflowing latrines, lack of water for personal hygiene, and poor food quality caused by quick contracting for host nation support - Christmas dinner was supposed to be a traditional feast of turkey, but the Arabs delivered spoiled turkeys, and other spoiled items). Once we finally got our equipment, we quickly moved out into the desert and quality of life improved greatly. We had plenty of our own latrines and showers, learned to eat MREs as a constant diet, and

spread out into our traditional signal sites, allowing more room to live and operate. The TPFD is a well-planned system - we should allow it to work in the future, and not knowingly send soldiers to a port weeks ahead of their equipment.

TRAINING

Ensuring proper training of all personnel is a basic responsibility of any commander.[2] As mentioned previously, the 141st Signal Battalion was not in good shape in the training arena, upon deployment on Desert Shield/Storm. The battalion had not trained in support of the 1AD since REFORGER 90 in January 1990, and was not properly manned due to preparation for MSE fielding. With all the old generation equipment sealed for turn-in, there was no ability to train prior to deployment. Hence, there were few trained teams and little team integrity.[3]

In order to prepare as much as possible prior to deployment, the battalion conducted training in several areas. Nuclear, Biological, and Chemical (NBC) classes were conducted, culminating in a gas chamber exercise to check every soldier's mask for fit and possible leaks. Due to time and personnel shortages, no decontamination or alarm training was possible. Firing ranges were conducted for the M-16 rifle and .45 cal. pistol in October 1990. In November, the battalion used 3rd Infantry Division ranges at Grafenwohr to train on AT-4 anti-tank weapons and M-203 grenade launchers. For signal training, the battalion conducted classes on calls for fire (for site

protection) and ran a Systems Control (SYSCON)/Technical Control (TECHCON) exercise.[4]

Once in the desert, the battalion continued a demanding training program, aimed at training the teams formed by new augmentees, as well as individual familiarization with weapons (both M-16 and .45 pistol ranges were conducted prior to combat operations).[5]

Signal training, our biggest concern, focused on FM RETRANS, multichannel radio, RATT, and Switchboard operations. The battalion also practiced jumping its non-backbone sites in conjunction with the units they supported. The Area Signal Centers (ASC), which provided the backbone system, did not jump as often, due to the higher priority requirement to train the teams in signal operations and procedures, and because the threat from SCUD missiles was not credible (the lack of accuracy of the SCUDs made them a low probability threat). It took every minute of available time to prepare the 141st for combat after the devastation caused by the MSE fielding cancellation in Europe, but when we crossed the Line of Departure (LD), we were ready.

OPERATIONS

Announcement of deployment immediately increased signal requirements within the 1AD in Germany. Additional Class A telephone lines were ordered to support the increase in movement and logistic planning, and the Division reconfigured its operations centers to deal with preparation for deployment.

Acquisition of Deutsche Bundespost (DBP) phones, mobile radio telephones (MRT), and secure facsimile (FAX) machines became high priority missions. There was an increase in Communications Security (COMSEC) requirements, and in obtaining radio frequencies for other USAREUR units (including Air Force units). The Division had to deal with non-doctrinal intelligence requirements, and the Assistant Division Signal Officer (ADSO) began to coordinate for commercial phone banks in SWA.[6]

There was obviously a doctrinal failure in providing the communications necessary in the critical initial stages of closing and moving forces in theater, despite the efforts of the 141st to resolve the issue prior to deployment. Upon arrival at the ISA in Al Jubayl, Saudi Arabia, the 141st, and the entire 1AD, ran into a problem we had anticipated prior to leaving Germany. Communications from the ISA to the ports and the Tactical Assembly Areas (TAA) were critical. This communications mission belonged to higher headquarters, as the 141st did not have any equipment in theater, and at any rate, none of its organic equipment had the long range capability required. This issue was raised to the VII Corps signal brigade well before deployment, but the Corps G-6 did not acknowledge responsibility. Indeed, the 93rd Signal Brigade (the Corps signal brigade) admits in their after action report that they did not focus on port communication requirements.[7] However, later in their after action report, they state that it was an Echelons Above Corps (EAC) failure to provide such communications, not a 93rd Signal

Brigade failure.[8] Since these communications were intra-Corps, the 93rd Signal Brigade and the Corps G-6 had the doctrinal responsibility to either provide the requisite systems or ensure they were provided by someone else (EAC) - VII Corps did neither. The result of the poor communications in the ISA/port areas was that combat commanders were forced to use unsecure MRTs and unsecure phone lines through a Marine Corps switchboard to conduct the vital business of closing forces in theater and moving them forward into the desert TAAs. The 1AD Assistant Division Commander was forced to drive from his TAA location to an area near King Khalid Military City (KKMC) just to get in range of an MRT tower in order to talk back to the 1AD command post (CP) at the ISA.

Internally, the 141st was forced to modify signal doctrine in order to provide for the communications requirements of the 1AD during its rapid advance in the attack. Doctrine called for the three Area Signal Centers (ASC) to establish the backbone for the Division multichannel system.[9] It was obvious that the ASCs would never get established before it was time to move again - signal doctrine appeared to be written for slower, more deliberate operations. Based on our experience on the last REFORGER exercise prior to deployment, when a fast paced attack left the backbone communications system in a shambles, we knew we would have to devise an entirely new multichannel architecture.

The only feasible architecture was a linear system, with the ASCs basically non-players until the pace of battle slowed. Our

decision was to form a non-doctrinal core system centered around the Division Tactical CP (DTAC). We would shoot a radio link from the DTAC to each of the combat brigades, and back to the DTOC (Main). However, a linear system also violated another doctrinal precept, that of redundancy in any system.[10] If any shot went down for any reason, there was no alternate path to connect the units. The shots to the brigades would be terminated directly to phones without going through the switchboards, service known as "long locals" and "sole user" circuits.[11] While this type of system limited service to other traditional multichannel users, it was the only way to support the fast moving battle using multichannel radio. The system would be expanded to a more doctrinal configuration when time and space permitted. Units that did not get multichannel service still had FM radio coverage and liaison officers to communicate within the Division.

Another break with doctrine involved the organization and employment of the FM RETRANS assets. Doctrinally, these assets are organized within C Company of the signal battalion, two located in each of the three ASCs.[12] Since FM radio was the principle means of communicating during the attack, the range extension provided by the RETRANS was critical. To better control these assets across the great expanses of the desert, we took RETRANS assets from other divisional units, and formed a separate RETRANS platoon, under the leadership of the C Company XO. We were then able to spread out the assets and place them in

key locations within the division wedge formation during movement, quickly bringing them up on the air as necessary.

A third doctrinal change was made in order to link the Division Support Command (DISCOM)/Division Rear CP (which remained in Log Base Echo, Saudi Arabia) with the rest of the Division deep in Iraq. Since the 141st had no organic equipment to reach this far, we collocated one of our multichannel rigs (AN/TRC-145) with the Corps multichannel site at Log Base Echo, and another AN/TRC-145 at the DREAR. We then strapped circuits over from the Corps rig to our collocated rig, and then shot them over our radio system to our DREAR rig. There is no doctrinal system such as this, but it was the only way we could tie the distant DREAR into the Divisional system. It took quite a bit of technical expertise to engineer this system, but we were successful in the endeavor.

The difficulty of linking the DISCOM with the rest of the forward deployed Division was an operational problem we had faced in Germany on nearly every Division exercise. The DISCOM never moved once it found a good location to initially set up, expecting the Signal Battalion to find a way to tie it into the multichannel system when the Division moved forward, out of range. Signal doctrine states that the DISCOM may not always be tied into the system based on their location[13], but I have never worked for a division commander that would permit this to happen. Combat or signal doctrine should be changed to either force the DISCOM to move with the division, or provide the signal battalion

with the means and mission to keep it linked if it does not move.

In addition to doctrinal changes, the 141st implemented procedural deviations from SOP, based on the requirement for fast communications installation. One example was the permanent mounting of the multichannel radio antennas on the backs of the rigs themselves. With virtually no overhead obstacles to worry about, we were able to leave the antenna launchers up on the vehicles, leaving only the "fly swatter" elements to be mounted once the vehicle stopped. This saved about half an hour in installation time, and allowed us to use multichannel radio during short breaks in movement that otherwise would have been impossible. The issuance of quick-erect antennas to signal units throughout the Army could provide this capability routinely.

Another example of innovation, which unfortunately was not successful, was our attempt to use FM RETRANS on the move by placing the RETRANS vehicles throughout the Division formation, and leaving the systems on during movement. We also kept OE-254 antennas mounted while moving. While theoretically this should have worked, equipment problems and the failure of the FM net members to switch over to the RETRANS frequency when out of range on the primary frequency resulted in failure. With practice and some experimentation, this means of radio range extension would probably work.

We also tried to extend FM radio coverage by using the airborne FM RETRANS located in the aviation brigade, but that, too, was unsuccessful.[14] Again, the Division never practiced

using this system, and inoperable equipment on the helicopter, as well as lack of training, foiled the effort.

Besides the fast pace of the Division's movement during the attack, another major obstacle for the 141st, as alluded to already, was the long distance between units which had to communicate. In addition to the FM radio problems already mentioned, we had problems with other communications means.

The only long range means of communications organic to the division signal battalion was the AM High Frequency (HF) radio, more commonly known as Radio Teletype or RATT (AN/GRC-142). We also had some new Improved High Frequency Radios (IHFR: AN/GRC-193 and 213) that had been issued to us just prior to combat. However, we could not get any PARKHILL secure devices for them, therefore any conversation could not be encrypted. Because of the ease of the HF radio signature to be traced by the enemy, we adopted a Division policy of not using HF radio until the Iraqi Direction Finding (DF) capability was confirmed to be knocked out, which was just before we began the ground battle. In addition, no-one was trained (or would cooperate in training) in the use of the IHFR, and HF frequencies are very sensitive to atmospheric conditions (there are separate packages of day and night frequencies which have to be tried to find a good frequency to use at any given time). Because of the 141st MSE conversion efforts in Germany prior to deployment, we had already turned in many of our RATT systems, so we lacked equipment as well. All these factors rendered HF radios practically useless.

Without HF, the Division had no organic long haul communications means. We thus had to request nonorganic systems from VII Corps to allow us to communicate over our Division area. We were able to use three different satellite systems to accomplish this mission.

The first system included several single channel tactical satellite units, located at the key Division CPs. While intended to be used only to communicate with Corps HQ, the Division used them for internal communications as well, while remaining on the Corps net. These assets were so valuable that most divisions throughout the Army are now getting them as organic equipment. The Army plan calls for 24 terminals in each heavy division.[15]

The second means of getting long range communications was the use of Corps multichannel tactical satellite equipment, provided by the 235th Signal Company, from Ft. Monmouth. We had one such system, which we repositioned in various locations so as to optimize communications for the Division.

A third satellite communications means was the International Maritime Satellite (INMARSAT), which is the system by which ships at sea communicate around the world. This was a strictly commercial, nonsecure system, but proved invaluable in communicating with the Division rear detachments back in Germany. We used this system for obtaining supplies from Germany, as well as morale/welfare, and personnel issues. This equipment was not designed to be physically bounced around the desert and needed frequent repair, but became the primary means of talking from the

middle of the desert back to Germany.

Another challenge to innovation arose in our requirement to establish communications with our adjacent units. Doctrine calls for the planning of interoperability of systems, even when they are not initially compatible.[16] Our right flank unit was the 3rd Armored Division, which had the new MSE equipment. MSE and the older generation equipment, which we still had, are not compatible. Probably the biggest difference is that MSE is digital equipment, while the old generation is analog. The GTE technical representatives were very pessimistic about the ability to link the two systems, but some smart officers in the 141st S-3 shop and the 143rd Signal Battalion S-3 shop were able to patch a connection that worked well. The Signal School at Ft. Gordon should provide training in connecting the various systems that exist on the battle field. Currently, everyone has to "reinvent the wheel" on this type of operation.

Unplanned multichannel requirements impacted greatly on the 141st. Doctrinally, there are specific customers for the divisional signal battalion's systems.[17] However, during Desert Storm, there were many extra units within the Division area that requested access to the system in order to link back to their own headquarters or conduct business within the Division. The intelligence community required special circuits for message traffic that were unknown until we got into theater. Psychological warfare units operating in our area needed access. Division staff elements had special line requirements that had

never before been identified. As a result, the 141st switchboards were completely filled, with no spare lines.

This oversubscribed switchboard situation caused problems for both equipment and operators. If one line or circuit went out for any reason, there was no spare to which to shift the customer - someone had to go without a line until all the lines could be restored. The switchboards were not designed for a continuous maximum load, and we faced more equipment breakdowns as a result. Switchboard operators were overworked and stressed. With so many subscribers on the system, it was not unusual to get frequent busy signals. Abuse of the line priority system resulted. For example, everyone in the DTOC knew that the CG's phone, along with a couple other phones, had high precedence (over-ride) capability. If the CG was not in the DTOC at a given time, other people would use his phone to over-ride other traffic and get their call through. Management of the precedence system at Division, Corps, and above was nonexistent, and frustration resulted.

Another problem arose with the Division G-2's requirement to have access to a special "Y" circuit, that would enable them to receive unfiltered (by Corps) intelligence data directly from national agencies. As a result, the G-2 could make intelligence estimates independent of the Corps G-2. The 141st never got a formal request for such a circuit from the Division G-2, but suddenly that circuit became the top priority circuit for the Division.[18] Obviously, it was not coordinated through

Corps, and the 141st had never before installed such a circuit. It was a difficult circuit to maintain, as it had to be processed through other communications systems - there was no direct access at Division level. In addition, special terminal equipment (AN/UGC-74) was needed to process the data quickly, and no-one had ever before used that equipment. Constant vigilance and a crash course on using the terminal equipment kept the circuit up most of the time, but it was a painful process. Once again, we fought differently than we trained.

An issue that arose during Desert Storm that never surfaced during training in Germany involved the role played by the signal units themselves. In Germany, signal support was always a "given", something that supported maneuver exercises, but never played a direct role in the conduct of the exercise. Communications were part of the infrastructure upon which exercises were conducted. Signal elements were not players in exercises. Of course, in real life, such as Desert Storm, signal support <u>was</u> a factor, and a critical one at that. For the first time, combat planners had to consider the limitations and combat multipliers that communications provided. It was obvious that non-Signal commanders and staffs had little or no training in the use of their signal assets. They did not understand the range, time requirements, or complexity of signal systems. They certainly did not understand the concept of "user owned and operated" equipment and systems. This failure in the training system points out the critical need for TRADOC to incorporate

signal training in various levels of all officer and NCO schooling, to include Officer Basic/Advanced Courses, Command and General Staff College, etc.

Another issue that supports an increase in signal training at non-signal schools is illustrated by a case involving the 1AD G-3 and their FM radios. The G-3 (at the DTOC), was responsible for running the Division Command (FM) radio net. In this notable case, everyone in the net was talking to each other, except for the DTOC. When it was pointed out that units right next to the DTOC were talking on the net, and the problem was in the DTOC radio, the G-3's proposed solution was for the 141st to send out another RETRANS to extend their range, rather than repair or replace their radio. The G-3 had no concept of communications principles.

The final area to be discussed under the "operations" heading is related to the two issues of doing things differently in Desert Storm than we did in Germany, and the fact that signal support was up until now a "given" part of the infrastructure. The simple problem was a lack of navigational aids and night vision devices within the 141st, but this led to more important problems.

When training in Germany, the 141st was able to navigate using familiar maps and terrain features. Besides an occasional compass, no other navigational aids were needed (this was true of all 1AD units). However, once in the desert, maps were of poor quality, and the lack of terrain features made navigation near

impossible (although experienced soldiers were able to get by within the TAA with only compasses). It became obvious to everyone in the Division that navigational aids were absolutely necessary to conduct the fast paced battle that was planned. The 141st was only issued 39 Lorans and 2 GPS ("Sluggers")[19] for a force that covered over 20 sites spread throughout the Division area. Some of those sites were small FM RETRANS sites, led by junior NCOs, that were expected to go to a specific spot in the desert and set up their systems to support the Division Command Net. The battalion had over 225 vehicles to drive through the desert, with only those few aids available.

Similarly, the 141st only had a few night visions devices, only enough for a few per company. With much of our movement done at night, this severely impacted our normal operations and movement formations.

Taken together, the shortage of both navigational aids and night vision devises forced the 141st to abandon its usual independent movement throughout the Division area. We were forced to travel in visual contact with other 1AD elements who had the requisite devices in order to stay on track and on schedule with those CPs we supported. Gone were the "hot jumps" we were used to providing to the Division in Germany, although we partially made up for this service by restructuring the multichannel backbone system as discussed previously. Gone also was our ability to pick our own routes of advance - we were truly tied to the other units' coat-tails. We were forced to line up,

bumper to bumper and follow, in single file, the unit we were supporting, especially at night. Drivers had to get close enough to the vehicle ahead of them to see the blackout markers on the tail-lights in order to stay together.

The 141st got into a very precarious situation because of the movement environment described above. On 27 February 1991, about a third of the battalion was following the 1AD DTOC during a combat movement. The DTOC suddenly stopped in front of us, which was not unusual, so we merely stopped behind them, about a kilometer to their rear. After a long period of time, the DTOC began to move again, so the 141st elements began to move as well. Night was beginning to fall, so the 141st vehicles closed closely behind one another so as to be able to see the blackout markers of the vehicle ahead. The battalion was in three single files of about 35 vehicles each. Suddenly, the DTOC stopped again and began to set up for operations. The 141st was about to break out to form their sites in support of the DTOC, when we learned the reason for the DTOC's first stop - they had run into a minefield strewn with unexploded munitions. The second stop to set up operations was just on the other side of the danger area. That left the 141st now in the middle of the minefield, bumper to bumper, in three columns, in the dark of night, with no way to clear through the danger area - the DTOC was blocking the other side.

There were two options at that point for the battalion: try to clear their own way through the mines/munitions in the dark;

or freeze in place until daylight or the movement of the DTOC. Since we had air supremacy and there was no artillery threat to the battalion elements staying bunched up, I decided to wait until daylight to pick our way out. There was nothing to be gained by attempting to pick our way out in the dark, and we would almost certainly suffer casualties. Orders were given to all the soldiers to stay in or on their vehicles, even if they had to answer nature's call, and rest in place. We told them of the danger, and to their credit, not one wandered off. The next morning, we were able to see well enough to move through the minefield, and set up our signal sites off to the side of the DTOC. Had there been a threat of enemy air strikes or artillery strikes, perhaps my decision would have been different.

After the battalion had stopped, I found the Chief of Staff in the DTOC, and asked why he left us hanging in the minefield. His response goes back to how he was used to the battalion moving independently in Germany - he just forgot we were trailing him when he stopped to set up operations. He had no idea he had trapped us in the danger area. If we had been issued enough navigational and night vision aids, we would, in fact, not have been trailing the DTOC - we would have been moving on our own, as we did in training in Germany. The Signal Battalion was never part of the Division movement plan - we were just expected to be there.[20]

LOGISTICS

While the personnel area was the most emotional, and operations the most challenging to our primary mission, the area of logistics was the most frustrating. Logistics immediately became a problem upon announcement of deployment, based on the halted MSE transition.

For months prior to deployment, the 141st had not ordered any spare parts for our signal maintenance activity, since it would have wasted tax payers' dollars by stocking parts for old equipment that was to be turned in to "as is complete" standards, rather than "10 - 20" standards. "As is complete" meant that we only had to have all the parts with major assemblages - it did not matter if the parts were operative or not. "10 - 20" standards would have required everything to be operable. Since we did not have to fix nonoperative equipment to turn it in for MSE transition, we did not order repair parts. When we were told to go back to our old equipment for deployment, the battalion had many inoperative assemblages and no spare parts to fix them. To make matters worse, most other signal units had already converted to MSE, and had gotten rid of their old generation spare parts. There were no spare parts available to fix our equipment in Europe, except in the 123rd Signal Battalion, and they were ordered not to release any parts to us in case they, too, deployed to SWA. Attempts to obtain our required parts and assemblages through various logistic systems were unsuccessful. As a result, the 141st deployed in a non-combat ready status for

equipment.

We were saved from disaster once in the desert, and before combat began, by the 123rd Signal Battalion. They were finally told they would not deploy to SWA, so they then sent us all their old generation repair parts and even replacement assemblages. They no longer needed them, since they completed MSE transition while we were in the desert. Their stock of spares carried us through the entire war, keeping us from having to take systems off the air and cannibalizing our own equipment.

At the same time we faced the spare parts problem prior to deployment, we also faced the problem of getting our 225 vehicles (most with generator trailers and signal shelters) to the port of debarkation (Bremerhaven, in our case). There was consideration of having us convoy to Mannheim, from which we would barge up the rivers to Bremerhaven, or convoy all the way to port. Finally, the decision was made to rail-load our equipment from Katterbach (our own town area) to Bremerhaven. This was probably the best decision for us, but only a few officers and NCOs had ever rail-loaded anything before. With reduced maneuver exercises in Germany, rail-load training for the Signal Battalion had become a thing of the past.

The 141st formed our few rail-load experts into a small battalion operations team and began teaching soldiers what needed to be done. Direct liaison with the Deutsche Bundesbahn, the German railroad, began, since the Division G-3 and G-4 could not effectively control the railhead schedule. The battalion took

several days to rail-load everything to Bremerhaven, and the operation was so successful that the CINCUSAREUR, GEN Crosbie Saint, came from Heidelberg to observe the 141st in action at the railhead. Our overworked small team of experts received praise and a few CINCUSAREUR coins of excellence from GEN Saint. His visit and the success of the rail-load lifted morale greatly at a time of great anxiety among the 141st soldiers.

Another initial problem in the logistics area was the coding of all equipment prior to rail-loading, using LOGMAR labels (bar coding). In order to prepare the actual labels to affix to the vehicles and trailers, the Type Unit Characteristics (TUCHA) data had to be known. In the case of the 141st, there was no data base containing the requisite information for any of our equipment. The battalion XO spent days creating the data from scratch, then travelling to Stuttgart, where the only machine to prepare the labels was located. His personal attention to detail was the only reason the battalion was able to overcome this obstacle prior to our scheduled rail-load. The Division and Corps logistic staffs provided no assistance. TUCHA databases should be built for specific units while in the training environment, so they are available for quick deployment.

In the logistics area of ammunition, the battalion turned in its entire basic load prior to departing Germany, in accordance with Division procedures. Upon arrival in SWA, we only got reissued 3/5 of our basic load, and only eight AT-4 anti-tank weapons: this, to protect many separate signal sites,

isolated in the desert (there were no combat forces available to provide C3 site protection).[21] At the heart of the issue, careful consideration has to be given to doctrine, versus resources and training, in signal site defense. If the signal battalion can never count on combat forces to provide security (and I have never been in a division where we trained that way), then we need to be issued a greater number of anti-tank weapons and train with them more frequently.

As mentioned previously, the 141st, and the entire Division for that matter, was issued new equipment that we had never seen before, let alone been trained or taught how to maintain. Some of this equipment was issued at the last minute, just before crossing the LD. Examples of these items were: IHFR; a new teletype (AN/UGC-74); ALPS printers; Single Channel TACSAT (AN/PSC-7, AN/VSC-3); INMARSAT; and hand held radios (AN/PRT-4). This new equipment, intended to help us, actually caused more problems in some cases. Without familiarity of operations, the IHFR was not used at all, despite our attempt to train with it before combat operations. The new teletype was used only after we found <u>one</u> Warrant Officer who knew anything about it - he single-handedly kept it on line for use on the Y-Circuit for the G-2, along with the ALPS printer. These two items proved the only way we could keep up with the volume of traffic on that circuit.

The satellite systems (SCTS and INMARSAT) proved to be invaluable, once the learning curve was overcome. The SCTS, as

mentioned before, became the only long range means of communications within the Division during movement, and the INMARSAT was our primary connection back to Germany. The hand held radios were the only means of communicating within the port when we first arrived in the ISA. Without them, we could not have unloaded our vehicles and equipment, and shuttled drivers between the port and ISA.

Another problem with the new equipment was the lack of repair parts or qualified maintenance personnel. When an item became non-operational, as many did, that item was out of the system for a long time, if not for the entire operation. The theater issued the equipment, but was not able to maintain it.

The remainder of key logistics issues deals with property. Before leaving Germany, we realized our CUCV vehicles would never be able to travel in the sand of the desert and keep pace with the tracked armored units. Signal doctrine calls for signal support to be mobile to support C2 transparently.[22] Our requests to swap out vehicles for HMMWVs was put on hold, and we were told we would be able to swap once we arrived in SWA. This proved to be true, but only at the last minute. The 141st completed changing all its vehicles only hours before crossing the LD into combat.

This last minute swap was the only thing that allowed us to perform our mission, as CUCVs immediately got stuck in the sand of Iraq. The HMMWVs performed admirably, even with the extra weight of signal shelters and towed generators. It took a short

time for our CUCV drivers to become familiar with driving the new HMMWVs, but they also performed admirably (even though most of them had never driven the HMMWV, and obviously were not licensed on that vehicle). At issue here, is Army procurement of equipment. CUCVs were marginal performers, even in Germany. They were not built to carry shelters and tow generator trailers, and to maneuver off-road. HMMWV-type vehicles should have been developed/procured originally for signal units, recognizing their unique requirements. "Buying cheap" and "off-the-shelf" are not always the best solutions in meeting the needs of Army units.

We did experience some tire problems with our new HMMWVs on the move from Iraq through Kuwait, into Saudi Arabia (KKMC). The tires held up fairly well in the sand, but once on the paved roads, we had many flat tires. Unfortunately, there were very limited spare tires for HMMWVs, and we got none when we were issued the vehicles.[23] We wound up dragging and lifting several HMMWVs in order to close our convoy in KKMC, only because of lack of spare tires.

Another property issue was that of accountability. Prior to combat, property accountability was fairly strict. During combat, accountability was fairly lax. After combat, accountability became strict again.[24] This cycle is understandable, and probably no different than during any other conflict. However, it caused problems at unit level, where commanders had to make decisions on leaving damaged equipment in the desert or trying to haul it along during the rapid attack.

A case in point involved a 141st generator trailer that broke down and could not be fixed or dragged during a night move in combat. The company commander called me on the radio and told me he was going to leave the generator in the desert. I warned him he would probably not be able to get by with claiming a "combat loss" once the war was over, and to try to repair or at least mark where the generator was left. Sure enough, after the war ended, the Division commander issued an order to go back and pick up any American equipment left in Iraq. It took us weeks to finally find our generator because another American unit picked it up when clearing their zone. Accountability of that one generator became one of our top priorities once hostilities ended.

Property accountability became an issue back in Germany, as well. After we deployed to SWA, the Division Rear commander (in Germany) ordered our battalion rear detachment commanders to turn-in any military equipment we left behind. He also ordered the central storage of station property. With all the supply experts in SWA, that operation resulted in non-qualified personnel trying to follow orders, but totally ruining property accountability. The 141st returned to Germany to find accountable items missing (turned-in, but no paper trail to account for it), and station property that had been secured when we left now jumbled together, with no idea of who owned what. When the battalion drew down as part of the reduction of units in Germany, there was no way to establish accountability for the

majority of missing or damaged property, due to the rear detachment actions.

One high point dealing with property was the manner in which the Division turned-in its equipment in Saudi Arabia prior to redeployment to Germany. The Division created a huge storage site and scheduled units to turn-in their equipment according to their return flight schedule. The turn-in operation was an enormous undertaking, and professionally done by the property book teams. A potentially excruciating process was reduced to a simple drill of cleaning the vehicles, parking them in designated spots, and accounting for major assemblages. It took the 141st only two days to turn-in all its major equipment (after several weeks of turning-in miscellaneous supplies and non-TOE items). The only equipment the 141st carried back to Germany consisted of individual weapons and personal gear (CTA-50). Certain station property was shipped back in MILVANs, and that brings up another problem for discussion.

Prior to deployment, all 1AD units filled MILVANs (large freight containers) with supplies and equipment they might need during Desert Shield/Storm, that they could not fit into or onto their vehicles. Items such as plywood, wash basins, washing machines, fest tables and benches, spare canvas, televisions, VCRs, etc. were loaded into these containers. We soon discovered the logistics system could not track these containers - no-one knew where they were at any given time, or when they would arrive in theater. Occasionally, the battalion would get a call that

one of their MILVANs had arrived, and we had to go claim it. Every one of our MILVANs was broken-into and looted before we got it, with all the valuable items stolen. This was the case throughout the Division, not just the 141st.

The final logistics issue to be discussed is that of medics. Some time ago, the Signal Center traded away medics in the signal battalions in order to gain more slots elsewhere on the TOE. This was never a problem during training in Germany or anywhere else I have been assigned, since other units had medics in close proximity to signal units, and during training, any major requirement for medical assistance stopped the exercise to attend to the emergency. However, in combat in the desert, the 141st was spread out all over the 1AD area, some of the units fairly isolated from any others. If we had gotten into a situation where mass casualties were taken by 1AD units, there is no doubt in my mind that the 141st would have been in dire straits for medical care. We had proficient "combat lifesavers", who did have the unwelcome opportunity to practice their skills during the operations, but they were very limited in what they could do. The plan for the signal units to call a nearby unit with medics during combat operations, was not a comforting situation. In combat, those other units would be busy with their own casualties, and not in a position to come to our aid. Also, it would be very difficult for my soldiers to find the other unit medics during the heat of battle. Precious time would be lost searching for them within their own formations. It is now my

firm conviction, based not on training environments, but on combat operations, that the Signal Center has to add medics back into the divisional signal battalions: Soldiers' lives are at stake. We must make this change now, and train routinely with our own medics.

MORALE

There were many things that affected the morale of the soldiers during Desert Shield/Storm, some positively and some negatively. Looking at the positive first, we can begin with the AT&T phone banks.

Upon arrival in SWA, AT&T offered (as coordinated prior to deployment) to install a bank of a couple hundred phones that were to be linked via satellite to Germany or the United States. The AT&T operation was very well done, and they moved the phone bank and satellite down-link as the Division moved. The only time we did not have access to the commercial phones was during actual combat. These phones allowed any soldier to call home and talk to his/her family for a period of ten minutes (the time limit was imposed by 1AD). Obviously, this ability was a tremendous morale booster for most soldiers. The fear imparted by television news back home could be greatly alleviated by a simple call home that everything was okay. However, these phones proved to be a double-edged sword, and I will discuss the negative side later.

The next positive item for morale is that of letters from

141st Signal Battalion veterans from World War II. I received a couple letters from veterans who wanted to share their lineage, prayers, and stories with us. Both of these veterans had served with the 141st in the desert and Italy during WWII. They spoke of fear, sorrow at losing comrades, capture, anxiety, and loneliness. They also spoke of joy, humorous incidents, and fond memories. This was the first time I knew there was a group of 141st alumni who had a reunion every year and kept in touch with combat buddies after all these years. The letters were so touching and moving, that I read them to my entire command and staff group, and made copies of them to be read to all the soldiers. I have never felt so emotionally uplifted as when I read those letters - they still have a great emotional impact on me today. We found a great positive morale booster in combat that we never had in our training environment in Germany.

Other positive morale issues were based on the home front. Our Family Support Groups (FSG) did a remarkable job in keeping the home fires burning and our families cared for. The soldiers were able to stay focused on the serious business at hand in the desert, knowing the families had pulled closer together and all was well back home. Our FSG sent us several video tapes of all the families with messages for their particular soldier, and tapes of the Superbowl and other major events. The joyous welcome home we got upon return to Ansbach is indescribable, and all the result of our FSG and rear detachment's hard work.

The German community also provided morale boosters for us,

by having their own welcome home reception, and by cooperating with our rear detachment in providing extra security and special events for our families. Our German "Partnership" unit held a special fest and tour of their city for our family members, as well. Once again, just knowing someone was looking after our families improved morale tremendously.

Probably the greatest professional morale booster while in the desert was the constant feedback from our communications customers that the signal support was outstanding and always reliable. Nothing raises a signal soldier's spirits like getting recognized for all the hard work performed and the quality of the product provided. It is common in the Signal Corps for soldiers to take a lot of criticism when communications are bad, but never any positive recognition from subscribers when communications are good: That was not the case in Desert Storm. The CG, ADCs, and brigade and battalion commanders personally and publically praised the 141st soldiers for their professional, exceptional duty performance. We constantly passed this praise on to the soldiers who deserved it.

With the good comes the bad, and there were several detractors to morale we experienced. Let us begin with the other side of the AT&T phone bank issue. While these phones were positive morale factors for some soldiers, they were negative for others. Some soldiers, when they called home, for some reason had to distort the situation in the desert (perhaps to sound "macho"), and told stories of fire fights and battles that simply

never happened. Their families were distressed and told other families, and the false news spread like wildfire. When the story was relayed to a family who had just gotten a comforting, factual call from their soldier, the animosity began. Who was telling the truth? I made it a point to try to call back to the rear detachment once a week, to dispel any false rumors spread via the AT&T phones, and there were plenty of them. Some of the stories were absolutely unbelievable, and I tasked my rear detachment commander to go to the family of the source, as well as the company FSGs, and set things straight. I also had the chain of command emphasize to the soldiers the importance of telling the truth to their families over the phones.

Probably the biggest detractor to soldier morale was the "broken" mail system. The large number of soldiers deployed to SWA, coupled with the Christmas holidays and the "To Any Soldier" mail campaign, created a huge glut of mail at SWA ports. The infrastructure was unable to accommodate the enormous volume of letters and packages being sent, especially incoming to SWA. Mail, despite commanders recognition of its importance to soldiers, was delivered late (six weeks to go from Germany to the soldier in SWA) and in many cases, wet and unreadable. There were not enough facilities to protect the mail from the elements, and much of it got soaked when it rained. Packages arrived ripped open, with much of the contents missing. Soldiers did not have much faith in the mail system to work in either direction. When a soldier did get mail from home, it was a tremendous morale

booster. When he/she did not get mail, the immediate thought was that the inadequate mail system had "swallowed up" a very important link to home. The next time U.S. forces deploy in large numbers to another theater, the mail system must be planned thoroughly in advance, and provisions for handling, transportation, and protection made. Speed in delivery is paramount.

Another detractor to morale, peculiar to the 1AD and other VII Corps units, was the rumor of unit deactivation. Some rumors held that units would inactivate before redeployment back to Germany, leaving families to fend for themselves, and in very difficult situations. Other rumors had the units inactivating immediately upon return to Germany. After fighting a war and living in the desert for five months, these rumors had a great negative impact on soldiers who were looking forward to going back to Germany, reuniting with family, and taking some time off to enjoy Europe. The senior leadership of the Corps and Division unintentionally poured fuel on this fire by changing their story on what was going to happen as they visited different units. One unit would be told that the leadership did not know anything about deactivation, while another would be told that there would be deactivation or drawdown shortly after return to Germany. This inconsistency caused a credibility gap between the soldiers and leaders, and lowered morale. Even as a battalion commander, I was unable to get a straight story about what was being planned. If senior leadership wanted to keep things close-hold,

the best way to handle it would have been to admit to soldiers that something was in the works, but the details were not yet releasable, or that they knew the plan, but were not yet at liberty to divulge the information. No-one believed the senior leadership when they said they did not know anything. Soldiers are very smart, and the truth is the best policy.

One of my personal regrets is that I did not get out to visit all my signal sites nearly as often as I would have liked. I found that as the Division Signal Officer, I was somewhat shackled to the DTOC location for required daily meetings, and helping the ADSO plan C3. Without a helicopter at my disposal, as the brigade commanders had, I could only go so far from the DTOC vicinity. Some of my soldiers told me later they would have liked to have seen the "old man" more often, and they were justified in their feelings. They were used to my frequent visits during exercises in Germany, where our sites were not as spread out and there were not daily meetings for commanders at the DTOC. Frequent visits are necessary because signal soldiers work on set shifts, and if visits are done infrequently, you can miss those soldiers who happen to be off-shift sleeping. The dual hat (commander and staff officer) business, the daily command and staff meetings, and the size of the 1AD area of operations cost my soldiers some valuable battalion commander leadership interaction, and became a negative morale factor.

CONCLUSION

Desert Shield/Storm was an unexpected mission for the 141st Signal Battalion, and VII Corps in general. Several modernization programs were in progress in 1st Armored Division, and they had to be canceled or otherwise overcome in order to allow the Division to deploy. The termination of the MSE transition for the 1AD, and return to the older generation communications equipment created massive challenges for the 141st, both before and after deploying to SWA. The battalion deployed at only 60% of critical personnel MOS; little or no teams trained; and only about 60% operational equipment, with no spare parts or assemblages. Once in SWA, we were able to repair all our equipment with the 123rd Signal Battalion's old equipment; receive and train nearly 100 filler personnel as members of teams; and carry out our mission as if we had deployed "full up."

Desert Storm revealed that existing doctrine and training programs failed to support combat operations. In order to be successful in combat operations, we realized that our operations in the desert would have to be totally different from the way we trained in Germany, and doctrine would have to be modified continually across the diverse areas of personnel, training, operations, and logistics. A new look at morale factors was required, as well.

The personnel arena was dominated by female pregnancy issues, and sole parent/dual service member issues. Pregnancy

became a means to avoid deployment, and thus became a source of resentment among soldiers and families. Pregnancy during training in Germany did not create many problems - pregnancy during combat operations caused great consternation. Likewise, invalid family care plans were fairly easy to hide during short exercises in Germany, but became serious problems during deployment. Army regulations should be changed to allow commanders to administratively separate soldiers who avoid deployment through pregnancy (or other means) or who fail to provide proper care for their families through invalid family care plans. Commanders should also be given the authority to deny the award of combat unit patches and combat service medals to those soldiers who avoid combat duty by becoming non-deployable through pregnancy or other means.

Training programs have to be developed by TRADOC and integrated into existing officer and NCO schools such as OBC, OAC, CAS3, and CGSC to educate non-signal officers in the planning requirements for communications. They learn about logistics, fueling of tanks, calls for fire, and many other combat multipliers/limitations; however, communications has been neglected to the detriment of combat efficiency. Especially today, with the dawn of "user owned and operated" equipment, a thorough understanding of communications is a requirement for combat effectiveness.

Doctrine became the first casualty in engineering a viable system to support a fast moving armored division in desert

combat. After dealing with the doctrinal failure to provide viable initial in-theater communications, the operations arena was dominated by devising ways to put together an integrated communications system, using old generation equipment along with new equipment never before seen in the Division, and interfacing with MSE systems to our flank. Traditional systems architecture and movement were not feasible in our new theater and with our new mission. The Division came to rely on three separate, non-organic satellite systems for its life blood during combat movements, since the 141st had no systems capable of covering the long ranges that existed. A linear multichannel radio system was devised (contrary to signal doctrine) to allow telephone communications during the rapid movement of the Division. The 141st was forced to remain close to supported units, and could not conduct the independent movements we executed in Germany. Initiative and common sense were the watchwords in communications planning, and were exercised many times on a daily basis.

The logistic arena was highlighted by overcoming poor equipment procurement (swapping CUCVs for HMMWVs), along with overcoming the failure of logistic channels to provide critical spare parts and assemblages (receipt of spare equipment from our sister signal battalion in Germany). Without these two events, the 141st could not have completed its mission. Also, more ammunition (especially AT-4s) and training has to be provided, or doctrine changed, to provide for realistic signal site defense. The logistic community must develop an accurate system for

tracking shipments of equipment to a theater, especially containers and MILVANs. In a more direct life or death logistics issue, medics need to be added back into Signal TO&Es - lives depend on this in combat, and this is not evident during training exercises.

Morale factors were dominated by the mail: morale was high when the mail came through, but the system was too undependable, with no-one having any faith in it. We had no trouble with mail during training exercises in Germany, so the failure of the mail system in combat was a new problem. Future operations involving deployment must plan thoroughly for effective mail handling.

Finally, it should be stressed that senior commanders cannot keep important information close-hold, and still have an effective leadership environment. Battalion commanders have to be kept informed of things that affect their soldiers and families, and be trusted to walk that fine line between keeping soldiers informed and maintaining operational integrity. To tell a soldier you do not know something, when in fact you do, is a lie that the soldier recognizes immediately, and which totally undermines the commander's credibility in every other endeavor. It is much better to tell a soldier that you know something, but are not yet at liberty to release the information. The soldier respects that honesty and the leadership environment is strengthened. The soldiers then have to trust the commander to make proper decisions concerning the information, even though he cannot yet release it.

FM 24-1, in describing connectivity doctrine, lists the familiar sequence: Higher to lower, left to right, and supporting to supported.[25] The 141st Signal Battalion provided flawless communications support to the 1AD during combat operations in Operation Desert Shield and Desert Storm by overcoming all differences between training/doctrine and actual combat operations, adhering to that additional tenant familiar to all soldiers: "Whatever works."

ENDNOTES

1. Captain (Ret) George M. Stotz, U.S. Army Signal Corps, interview by author, 5 October 1992, Ansbach, Germany, letter.

2. Department of the Army, Signal Support in the Airland Battle, Field Manual 24-1 (Washington: U.S. Department of the Army, 15 October 1990), 2-9.

3. Major Wayne White, U.S. Army Signal Corps, interview by author, 18 November 1992, Washington, D.C., notes.

4. Ibid.

5. Ibid.

6. MAJ Carl Menyhert, U.S. Army Signal Corps, interview by author, 23 October 1992, Ft. Monmouth, New Jersey, notes.

7. Department of the Army, 93rd Signal Brigade After Action Report, Operations Desert Shield and Desert Storm, (APO New York: Headquarters, 93rd Signal Brigade, 2 October 1991), 2.

8. Ibid., A-2.

9. Department of the Army, Combat Communications Within the Division (Heavy and Light), Field Manual 11-50 (Washington: U.S. Department of the Army, December 1988), 2-36.

10. FM 24-1, 2-2.

11. Wayne M. White, "Communicating on the Move," Army Communicator 16, no. 3 (Summer 1991): 35.

12. FM 11-50, 2-36.

13. Ibid., 2-71.

14. White, interview notes.

15. Major General Robert E. Gray, Commanding General, U.S. Army Signal Center & Ft. Gordon, interview by author, 5 February 1993, Carlisle Barracks, Pennsylvania, notes.

16. FM 24-1, 2-5.

17. FM 11-50, 2-34 - 2-36.

18. Menyhert.

19. MAJ Gregory L. Hamlett, U.S. Army Signal Corps, interview by author, 18 November 1992, Washington, D.C., notes.

20. White, interview.

21. Hamlett.

22. FM 24-1, 2-4.

23. Hamlett.

24. Ibid.

25. FM 24-1, 2-2.

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