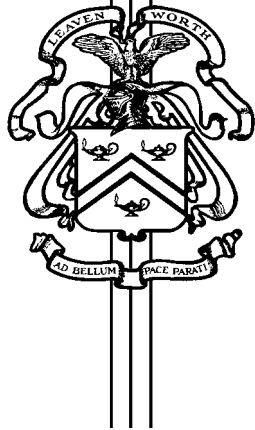


66 STORIES OF BATTLE COMMAND



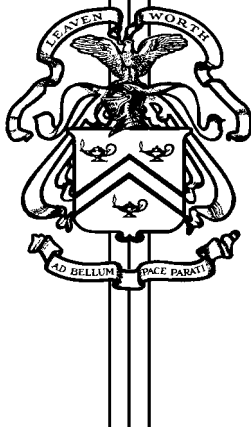
U.S. Army Command and General Staff College Press
Fort Leavenworth, Kansas

School for Command Preparation

*Command and General Staff College
Fort Leavenworth, Kansas 66027*

presents

66 STORIES OF BATTLE COMMAND



*Adela Frame and James W. Lussier, Editors
Fort Leavenworth Research Unit
United States Army Research Institute
for the Behavioral and Social Sciences*

Library of Congress Cataloging-in-Publication Data

66 Stories of Battle Command / Adela Frame, James W. Lussier, Editors
xi, 255 p. maps; 23 cm.

Includes index.

ISBN

1. Military Command, Modern - - 21st century. 2. Military
Decision Making, Modern - - 21st century. 3. United States - - Army
Commanders - - Narratives. 4. Military Maneuvers - - California - -
Fort Irwin 5. Military Art and Science - - Narratives. I. Title. II. Frame,
Adela. III. Lussier, James W.

2000

U260.

355.4/

U.S. Army Command and General Staff College Press,
Fort Leavenworth, KS 66027

FOREWORD

The U.S. Army Research Institute (ARI) Research Unit at Fort Leavenworth and the School for Command Preparation (SCP) of the Command and General Staff College have a long history of mutual support which dates back to the inception of the Tactical Commanders Development Course (TCDC) in 1988. Since then, ARI has periodically conducted interviews and surveys of numerous SCP graduates in a continuing effort to maintain the high quality of TCDC and more recently to support the development of the Battle Commanders Development Course (BCDC).

One finding that has consistently emerged from these studies is the unsolicited praise for the exchange of stories and personal maxims that occurs during TCDC and BCDC. As we have found in our studies of other aspects of tacit knowledge, the military tradition of instruction through experience and historical example has a sound foundation in psychological theory. SCP seminars and exercises regularly prompt battle commanders to relate personal accounts that illustrate battlefield concepts. These practical anecdotes have a clear motivational value and also provide a lasting source of easily recalled tactical knowledge.

The current project was initiated to collect stories from experienced commanders. These stories will supplement the BCDC curriculum by providing a common pool of anecdotes to successive classes. They will also provide a basis for a broader discussion of requirements for future battle command.

The candor and commitment of the experienced commanders who shared their stories is greatly appreciated; they have made a significant contribution to the next generation.

JOHN R. WOOD
Brigadier General, USA
Deputy Commandant

DR. EDGAR M. JOHNSON
Director
Army Research Institute

ACKNOWLEDGMENTS

The editors wish to gratefully acknowledge the contributions of the following persons:

Retired General Fred Franks, Jr. for his substantial work to characterize and promote active consideration of Battle Command within the U.S. Army.

Major General William S. Wallace and Major General Russel L. Honore for essential narrative contributions in addition to gracious introduction to commanders within the U.S. Army 4th Infantry Division (Mechanized) and 1st Cavalry Division.

Colonel John D. Rosenburger and Major James L. Miller for preliminary contribution and encouragement as well as insights for continued refinement of the project method and purview.

Lieutenant Colonel Michael Prevou who served as the representative of the School for Command Preparation and developed the methods of incorporating the book into the program of instruction at the Tactical Commanders Development Course.

Dr. Robert S. Ruskin and the continuing quality support of the Consortium Research Fellows Program at the U.S. Army Research Institute for the Behavioral and Social Sciences.

And most appreciatively, to Mr. Robert E. Solick for his careful reading, perceptive suggestions, and judicious guidance.

CONTENTS

<i>Forward</i>	iii
<i>Acknowledgements</i>	iv
<i>Contents</i>	v
<i>Lesson Themes</i>	ix
<i>Illustrations</i>	xi

Introduction 1

by **GENERAL FRED FRANKS, JR., US ARMY (RETIRED)**

Battle Command Stories

1. *Company Team Knows Its Sector* 7
2. *Misreading the Effects of Terrain* 9
3. *Mentally Preparing for the Mission* 11
4. *See Yourself* 13

MAJOR GENERAL WILLIAM S. WALLACE
COMMANDER, 4TH INFANTRY DIVISION (MECHANIZED), 1999

5. *Orchestration and Synchronization* 15
6. *Clear Objectives for Clear Intent* 16
7. *Enriching Experience* 18

BRIGADIER GENERAL RUSSEL L. HONORE
ASSISTANT DIVISION COMMANDER, 1ST CAVALRY DIVISION, 1998

8. *Carousel of Deception* 25

BRIGADIER GENERAL [RETIRED] HUBA WASS DE CZEGE
SENIOR MENTOR, DIGITAL ADVANCED WARFIGHTING EXPERIMENT, 1999

9. *Follow Your Heart* 29
10. *Picture of the Obstacle* 31
11. *Simultaneous Attack* 33

COLONEL GEORGE BOWERS
COMMANDER, 2ND BRIGADE, 1CD, 1998

12. *Leave OPFOR Tactics to the OPFOR* 37

13. *Shaping the Battlefield for a Flexible Defense* 39

COLONEL JOSEPH FIL

COMMANDER, 1ST BRIGADE, 1CD, 1998

14. *See the Terrain to Assess the Terrain* 43

15. *Critical Forward Check* 45

COLONEL BENJAMIN FREAKLEY

COMMANDER, 3RD BRIGADE, 1CD, 1998

16. *Leadership in a Composite BCT* 49

17. *Pressure to Decide* 50

18. *Seize the Initiative* 54

19. *Conditions for Attack Dissolve in Bad Weather* 57

20. *Huddle on the Battlefield* 62

21. *Two MICLICs Delay Breach* 66

COLONEL TED KOSTICH

COMMANDER, 2ND BRIGADE, 4ID(M), 1999

22. *Pick Up the Red Pen First* 69

23. *Everything Takes Longer Than You Think* 72

24. *Tactical Patience and Managing Battle Tempo* 75

25. *No News is Bad News* 76

26. *Survivability on the Move* 79

COLONEL RICK LYNCH

COMMANDER, 1ST BRIGADE, 4ID(M), 1999

27. *Air-Ground Planning* 81

28. *JSTARS Missing Link* 84

29. *Aviation BCT Challenges* 86

30. *Safety and Fratricide at Live Fire* 88

31. *Apaches in Every Valley* 90

32. *Rock Drills for a Common Picture* 92

COLONEL CRAIG MADDEN

COMMANDER, 4TH BRIGADE, 4ID(M), 1999

- 33. *Sensing the Battle* 95
- 34. *Stop and Fuel or Go Without* 97
- 35. *Too Many Changes of Mission* 104

LIEUTENANT COLONEL DOUGLAS BOONE

COMMANDER, 1ST BATTALION 5TH CAVALRY, 1CD, 1998

- 36. *Engineers in the TOC* 111
- 37. *Unknown Avenues of Approach Along the South Wall* 118
- 38. *Accelerated Decision Making Process* 121
- 39. *Engineers at the Point of Attack* 122
- 40. *Integrated Countermobility Destroys Enemy* 126
- 41. *Hell Bent on Breaching* 127
- 42. *Up the Furlong* 130

LIEUTENANT COLONEL DAVID HANSEN

COMMANDER, 20TH ENGINEER BATTALION, 1CD, 1998

- 43. *Launch Me Early* 133
- 44. *Aviation Company Lessons, Developing Engagement Area* 137
- 45. *Nothing in the North* 140

LIEUTENANT COLONEL DYFIERD A. HARRIS

COMMANDER, 1ST BATTALION 4TH ATTACK AVIATION, 4ID(M), 1999

- 46. *Quick Correction in the Bowl* 145
- 47. *Washboard Attack* 150
- 48. *Moving Cautiously to Contact* 153

LIEUTENANT COLONEL ORLEY H. JOHNS

COMMANDER, 3RD BATTALION 8TH CAVALRY, 1CD, 1998

- 49. *FASCAM Kills* 159
- 50. *Trusting Your “Eyes”* 161

LIEUTENANT COLONEL STEPHEN MITCHELL

COMMANDER, 2ND BATTALION 82ND FIELD ARTILLERY, 1998

- 51. *Fighting Digital, Fighting Analog* 165
- 52. *Hounds From Hell Racing Across Germany* 170
- 53. *Unknowns of Digital Doctrine* 176

LIEUTENANT COLONEL JOE MOORE

COMMANDER, 1ST SQUADRON 10TH CAVALRY, 4ID(M), 1998

54. *Seventy-Two Hour Guard Mission* 183

55. *Too Bold for Day One* 190

56. *From Parts to a Whole at NTC* 193

LIEUTENANT COLONEL JOE MOORE

COMMANDER, 1ST SQUADRON 10TH CAVALRY, 4ID(M), 1999

57. *Scatterable Mines, Force of the Future* 199

58. *In the Dirt* 201

59. *Be at the Breach* 204

LIEUTENANT COLONEL JOHN PEABODY

COMMANDER, 299TH ENGINEER BATTALION, 4ID(M), 1999

60. *Remnants of the FSE* 207

61. *Fighting Dirty* 217

62. *OPFOR Deceived in the Fog* 225

LIEUTENANT COLONEL FREDERICK RUDESHEIM

COMMANDER, 1ST BATTALION 9TH CAVALRY, 1CD, 1998

63. *Coalition Forces* 229

LIEUTENANT COLONEL THOMAS R. RUHL

COMMANDER, 2ND BATTALION 8TH INFANTRY, 4ID(M), 1999

64. *Brute Force and Ignorance* 233

65. *S3 on the Battlefield* 238

66. *Battle Command Team* 243

LIEUTENANT COLONEL CHRISTOPHER TUCKER

COMMANDER, 2ND BATTALION 5TH CAVALRY, 1CD, 1998

Index 247

LESSON THEMES

<u>GENERAL THEME</u>	<u>STORY NUMBERS</u>
<i>Command and Control, Staff Planning Process</i>	3, 27, 28, 36, 38, 66
<i>Command Estimate</i>	3, 22
<i>Command Intent, Communicating to Subordinates</i>	6, 19, 20, 25, 27, 28, 31, 63, 64
<i>Command Position on the Battlefield</i>	29, 33, 45, 58, 59, 65
<i>Command Thought Process, Use of Commander Time</i>	3, 8, 10, 15, 32
<i>Contingency Planning</i>	35, 65
<i>Creating Confusion, Ambiguity</i>	5, 8
<i>Decision Process Management</i>	3, 17, 18, 33, 34, 35, 51, 60
<i>Enriching Experience</i>	7, 11, 54, 57, 58
<i>Flexible Planning, Flexibility, Adaptive Execution</i>	13, 16, 19, 48, 52, 59, 61, 62, 64
<i>Focus on Mission</i>	41, 43, 52, 61
<i>Intuition</i>	9, 33, 49, 50
<i>Know Unit Capabilities</i>	7, 12, 14, 43, 56

<u>GENERAL THEME</u>	<u>STORY NUMBERS</u>
<i>Modeling a Thinking Enemy</i>	5, 13, 17, 22, 26, 33, 49
<i>Monitoring Enemy</i>	5, 8, 23, 60, 64, 66
<i>Personal Wargame</i>	3, 14, 48
<i>Situational Awareness</i>	4, 8, 10, 20, 31, 39, 46, 51
<i>Staff and Subordinate Reporting</i>	4, 6, 10, 17, 25, 43, 50, 55, 63
<i>Supervision</i>	15, 32, 46, 54, 66
<i>Synchronization, Considerations of Timing</i>	5, 7, 11, 21, 23, 24, 26, 27, 34, 35, 40, 60
<i>System Employment and Capabilities, Use of Assets</i>	1, 6, 11, 21, 25, 28, 29, 36, 40, 57
<i>Technology</i>	10, 14, 23, 24, 28, 43, 44, 51, 52, 53, 57
<i>Terrain Appreciation, Reconnaissance, Using Terrain</i>	1, 2, 8, 14, 37, 47

ILLUSTRATIONS

Maps, National Training Center, Fort Irwin, California

- Figure 1. Northern Corridor/Live Fire Area, NTC. 3
- Figure 2. Central Corridor, NTC. 4
- Figure 3. Southern Corridor, NTC. 5
- Figure 4. Brigade Combat Team Defensive Plan. 51
- Figure 5. Reconstituting the Reserve. 53
- Figure 6. Day 1 Attack – Base Plan. 55
- Figure 7. Day 2 Attack – Initial COA. 57
- Figure 8. Day 2 Attack – FRAGO. 59
- Figure 9. Brigade Combat Team Attack to Hill 720. 98
- Figure 10. FRAGO to Refuel at Furlong Ridge. 100
- Figure 11. Attack Over Siberian Ridge. 103
- Figure 12. Meeting Engagement in the Central Corridor. 106
- Figure 13. OPFOR Main Body Maneuvers North. 108
- Figure 14. OPFOR Bypasses BCT Defense. 120
- Figure 15. Attacking Furlong Ridge and the Whale. 131
- Figure 16. 3-8 CAV Defense in the South. 147
- Figure 17. 3-8 CAV Attacks Through the Washboard. 151
- Figure 18. 3-8 Movement to Contact – Central Corridor. 154
- Figure 19. 1-9 Movement to Contact – Central Corridor. 209
- Figure 20. Advance Guard Main Body Maneuvers South. 213
- Figure 21. Attack Through Brown and Debnam Passes. 218
- Figure 22. 1-9 CAV Reorients North. 222
- Figure 23. OPFOR FSE Attacks to Iron Triangle. 227
- Figure 24. Attacking the MRB in the Washboard. 234
- Figure 25. Attacking the MRC at Gary Owen. 239

INTRODUCTION

Soldiers have always been good storytellers. Along with the doctrine and training and drills, along with the study of military history, the personal recollections of fellow soldiers are an important source of developing a feel for the art of battle command. Stories are a primary means of transmitting the tribal wisdom of the profession of arms.

Years ago, as a young officer, on the verge of entering my first war, I knew an older soldier, a veteran of the Korean War. I listened to many stories told by this soldier, and embedded in those stories were lessons arising from the experience of combat. These were real stories of decisions and the emotions surrounding them, set in actual wartime situations, not mere precepts in a leadership manual. Later, facing the challenges of combat, I recalled those lessons and the stories that had made them memorable. These warstories had been an important and unmistakable part of my preparation for combat.

In today's Army, there exists an unspoken stricture against telling warstories – an implied message that “no one wants to hear your warstories.” Nothing could be more wrong. The commander who shares his experiences, good and bad, encourages a climate of open exchange and honest appraisal. These stories are valuable. They stimulate, they enrich, they teach.

This book contains stories from field and general officers commanding in training exercises, most from rotations at the National Training Center. In their stories, they describe their thoughts, their actions, their successes and especially their mistakes. In each story the commander tells how he learned an important lesson in battle command - and he identifies the lesson. And every story succeeds; there is not one without a valuable lesson. The willingness to share is striking from every contributor. Each has shown no reticence in honestly describing his errors, the mark of a confident, experienced, and learning student of the military art.

As you read the stories, note well. Few are about tactical maneuvers and doctrinal principles. Instead, they are stories of friction and confusion - friction generated in the challenging task of orchestrating the actions of a large complex force. This, under the pressure of a hostile environment and a wily, punishing OPFOR, who know the habits of BLUFOR commanders as well as they know the terrain. And they are stories of growth, as the commanders strengthen their intuitive feel for battlefield dynamics, a process achieved only through experience and practice. I commend the creative, forthright, hardworking, reflective, and insightful commanders presented in these stories. They are serious students of the art of battle command.

GENERAL FRED FRANKS, JR. U.S. ARMY (RETIRED)

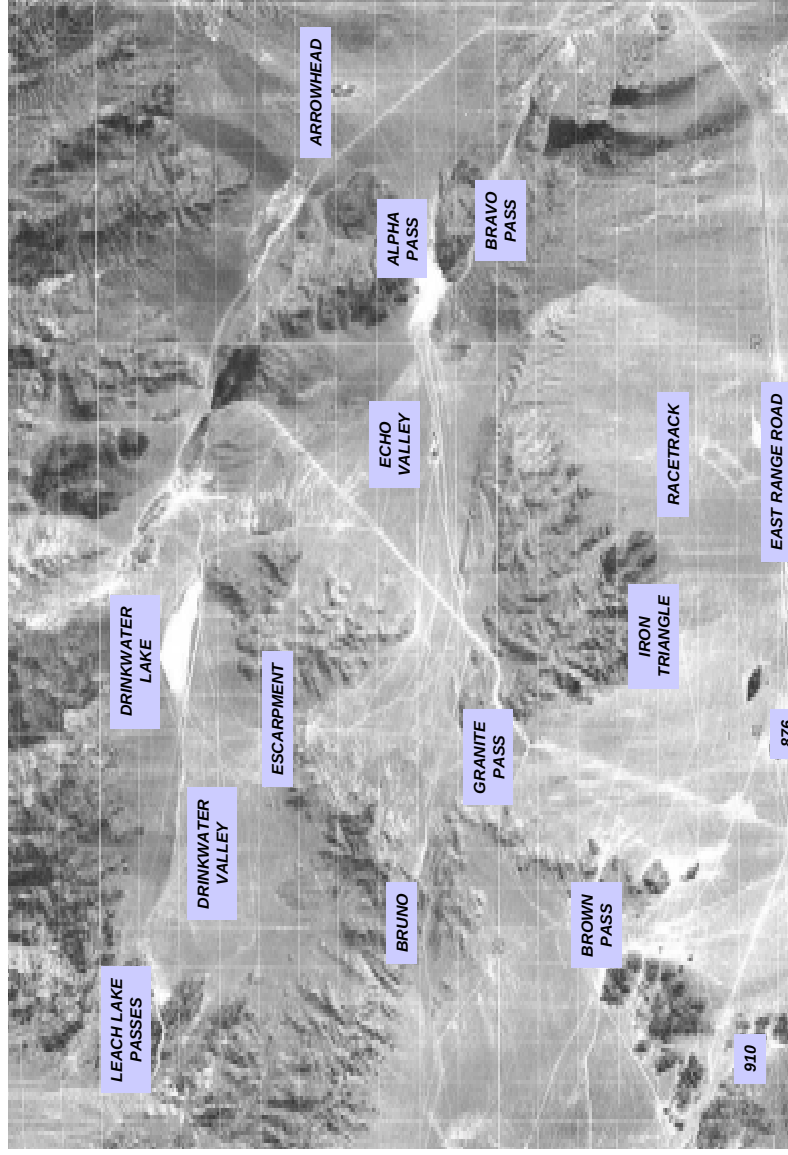


Figure 1. Northern Corridor/Live Fire Area -- National Training Center, Fort Irwin, CA.

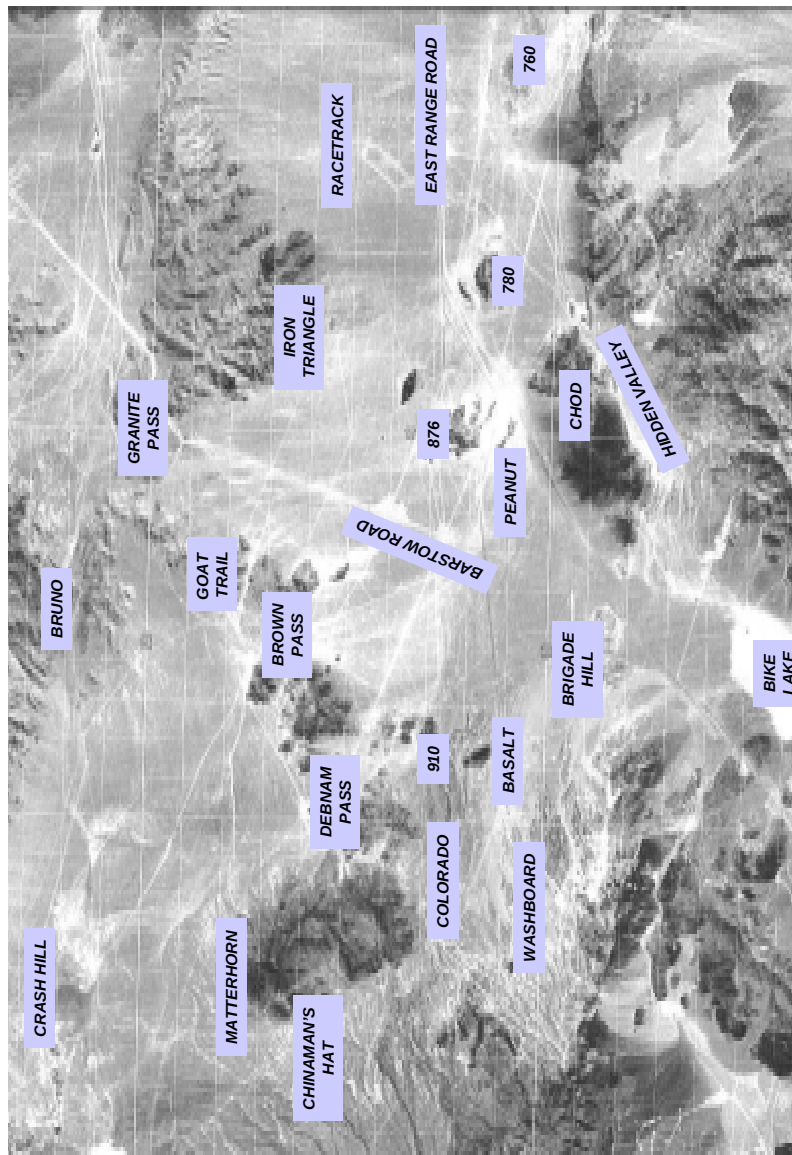


Figure 2. Central Corridor -- National Training Center, Fort Irwin, CA.

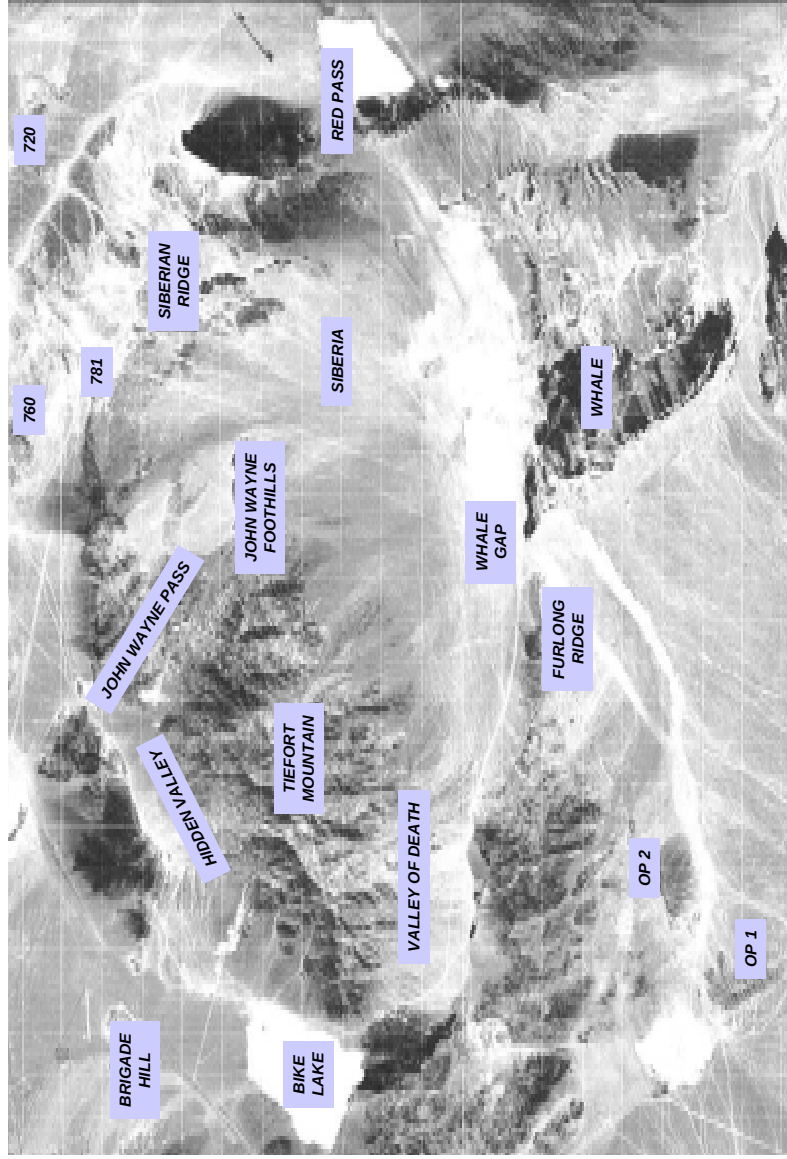


Figure 3. Southern Corridor -- National Training Center, Fort Irwin, CA.

MAJOR GENERAL WILLIAM S. WALLACE, 1999

1. Company Team Knows Its Sector

A number of years ago at NTC I saw a company team of five tanks, two Bradleys, and about a platoon of dismounted infantry defeat the entire OPFOR regiment. It was just surprising. Great fight and some very good actions by a young company commander and his sergeants. They were defending Red Pass, the economy of force effort for the battalion. The battalion main defense was elsewhere, up on the Siberian Ridge up by 781, because that is where they expected the OPFOR to attack. They had a substantial amount of engineer effort put in a complex obstacle in Red Pass. There was a wire mine obstacle and a tank ditch in Red Pass that happened to be in about the right place.

The OPFOR regiment, based on their reconnaissance, knew the tank ditch and wire mine obstacle was there but they also knew it was lightly defended. So, they opted to attack with the entire regiment, all 180 some vehicles, into Red Pass. The fight broke down like this. The battalion is defending. The OPFOR comes rolling through the Whale Gap, took a hard right heading toward Red Pass, using heavy smoke so the battalion didn't recognize where the main effort was going until very late in the fight. The OPFOR's lead motorized rifle battalion arrived within range of Red Pass. This company commander and his XO had positioned their tanks up on a piece of high ground on the south side of Red Pass and started taking the OPFOR under fire with their M1s at very long range. They killed a few OPFOR vehicles early on which caused the OPFOR to slow down a little bit.

What they did following that, which was very smart on their part, was after firing a number of rounds and killing a number of OPFOR vehicles, they withdrew off of that high ground into their prepared fighting positions which were on the reverse side of Red Pass. In the process of doing that, the OPFOR recognized that there were some vehicles located up on that high ground and elected not to try to assault that high ground and tried to assault around the opposite side of Red Pass. Of course, these vehicles have withdrawn in depth into their fighting positions. And while the OPFOR was trying to assault around the left side, they committed their breaching assets into the complex obstacle.

It just so happened there was one tank crew in a wadi on the north side of Red Pass. One tank crew who had reconned to the nth degree and knew every inch of that wadi. As the OPFOR's assault elements and engineer assets approached the obstacle, that one tank crew started taking them under fire and killing every one of them. They would fire two rounds, duck down in the wadi, move along the wadi, come up to

"The OPFOR ...thought they had a whole platoon, maybe a company, off on their left flank, and it was one single tank that was using the terrain very, very well..."

another firing position, fire a couple of rounds, duck down, move to another position, come back up, fire a couple of rounds and so on. So, as far as the OPFOR was concerned, they thought they had a whole

platoon, maybe a company, off on their left flank, and it was one single tank that was using the terrain very, very well, and had boresighted their weapon system.

Ultimately the OPFOR recognized that and they dismounted a bunch of infantry to try to take out this tank. The infantry, dismounted, came over another piece of high ground on the north side of Red Pass. As they crested that high ground, a Bradley, which was located in depth behind the tank, started taking them under fire. With his 25mm he destroyed every one of the OPFOR dismounted infantrymen. By this time, the OPFOR had lost about two battalions worth of combat power. Because while the OPFOR is all gagged up expecting to have a relatively easy time of breaching, artillery starts falling on them and they take some attrition from the artillery.

Eventually the OPFOR did breach the obstacle. They got about a battalion's worth of vehicles through the obstacle on the other side of Red Pass when they ran into the company commander, his XO, and another tank who had pre-positioned earlier into their dug-in positions. They essentially destroyed that final MRB from an area where the OPFOR didn't expect to be shot from by a force they didn't expect to be there. By that time, the task force had figured out what was going on and moved some tanks around on the other side of Red Pass. The end result of the fight was that this one young company commander, with five tanks, two Bradleys, and some dismounted infantry, destroyed about three motorized rifle battalions and most of the engineer

breaching assets of the OPFOR. It was absolutely brilliant and something you don't see very often.

What the hell does that have to do with battle command? Well, you had a commander, a young captain, who understood the piece of terrain he was fighting on. He really understood it. He knew where his tanks needed to be initially to get long-range shots. He knew where he could position behind the defile to take advantage of shorter range shots if the enemy did come through the breach. He had a tank on the

"One young company commander, with five tanks, two Bradleys, and some dismounted infantry, destroyed about three motorized rifle battalions... It was absolutely brilliant."

north side of the obstacle that was using the terrain very wisely. He knew precisely the ranges at which his tanks could kill with MILES. So, he knew himself very well, he knew the terrain very well. I think he had a pretty good idea how the enemy would have to fight him if they came through that particular area because that was a fairly narrow choke point. There really wasn't any opportunity for the OPFOR to mass there without securing both flanks of the obstacle, which he'd denied them for a long period of time.

2. Misreading the Effects of Terrain

I don't think we do a good job in our Army these days of reading terrain. We all understand the terrain is out there but I don't think we regularly do a good job identifying the advantages and disadvantages of a particular piece of dirt. Let me give you an example from a fight at the NTC. The brigade was attacking from east to west at NTC. There is an area in the southern portion of the corridor called the Washboard, a very rugged, undulating, series of wadis. The objective was on the far side of Brown/Debnam Pass back by Crash Hill. The Brigade elects to attack through the Washboard for all the right reasons except they didn't pay attention to the terrain. They knew the enemy was weakest in that area. They knew that the enemy probably would not expect them to attack through that area. They knew that the strength of the enemy's defense was up by Crash Hill, in the Brown/Debnam area, which was

better maneuver terrain for the organization. They attacked through the Washboard and they have an unsuccessful attack.

The reason the attack was unsuccessful is not because they decided to attack in the wrong place. Not that they attacked where the enemy was weakest, but the terrain caused their offensive operation to be slowed to the point where the OPFOR could tell where they were coming, react to them, reposition, and in fact, when they made contact with the OPFOR, the OPFOR was stronger in the Washboard than elsewhere. The OPFOR had had an opportunity over a period of several hours to recognize that the brigade's main effort was in the Washboard area just because the terrain slowed the brigade to the point where they couldn't react any quicker. All the right things were done at the brigade level to attack the weak point, an assailable flank, through an area where the enemy didn't expect them, except they didn't recognize the fact that the terrain made it a less feasible course of action than it appeared to be if you looked at a flat map with no terrain influences.

*"All the right things were done ...
to attack the weak point, an assailable flank through an
area where the enemy didn't expect them, except they
didn't recognize the fact that the terrain made it a less
feasible course of action than it appeared to be..."*

The contour interval on some 1:50,000 maps and especially the NTC map do not fully represent the terrain. In areas, they miss radical changes in elevation. Wadi systems you may travel across don't show up on the map because the contouring is a twenty meter interval and will not catch the true terrain character. A ten meter deep wadi doesn't necessarily show up on the map. That can be very significant to a tank crew. So, if you do nothing but look at the map and determine where you are going to attack, then you don't necessarily recognize the severity of some of the pieces of terrain over which you are trying to attack. It just flat slows you down. The enemy has an opportunity to see what you are doing and because he is in a piece of terrain that is not as severe as the one over which you are attacking, he can react to you quicker than you can close with him and attack. You have a major problem.

3. Mentally Preparing for the Mission

In terms of battle commanders, I guess there are two things I would share. First, it has always been my belief that every once in a while a commander has to take time to think. And frequently because of the urgency of what is going on, in either a training simulation or a combat situation, you get so involved in the urgency of the *right now*, that you don't take time to think. I have seen a very few commanders who have taken the time the night before they were going to start an attack or defense and take time for themselves, all by themselves, with a map and their own brain and sit down and say, "OK, here's where I think my folks are positioned and here's what I think the enemy is going to do tomorrow." So, you are wargaming in your own head without a bunch of staff officers there giving you their opinions. Just wargaming in your own mind how you think the fight is going to go down tomorrow. Some commanders can do that in 15 to 20 minutes; some commanders take an hour to an hour and a half to do it. But, in my judgment, it is an absolutely essential piece of being a commander to have some idea of what you expect to happen in the upcoming operation. In our doctrine, we call it visualization of the battlefield.

"You get so involved in the urgency of the *right now*, that you don't take time to think."

My notion is just sit down and think. I tell my folks that you must do that. The night before the fight, go sit in your vehicle with the map. Tell your driver to not let anyone bother you. Sit there with a cup of coffee, and just kind of map out to yourself. Think about how you

"Sit there with a cup of coffee, and just kind of map out to yourself. Think about how you expect the enemy will come, and importantly, what you are going to do about it."

expect the enemy will come, and importantly, what you are going to do about it. If you do that appropriately, and there is no way it is going to be completely right, but in my judgment you can get to about a 70% solution just thinking your way through it. The 30% that you don't get to is the stuff you have to jump on in the morning, but the 70% you do get right is pretty valuable. Those are judgments and observations and

expectations that you've already thought out ahead which allow you to react quicker when it does happen than had you not thought about it.

Now, what that should generate, in my judgment, is probably three or four things. First of all, you have some idea as a result of this personal wargame of what decisions to expect to have to make tomorrow. My experience is if you take the time to do that, you can probably figure out 70-80% of those decisions. I'm not talking about whether to have eggs or bagels for breakfast. I'm talking about when do I have to commit my reserve? When do I have to transition from offense to defense? When do I expect my offensive capability to have culminated? When do I have to reposition my artillery? How long does it take to do that? Big, big decisions. Major muscle movement decisions. And it has always seemed to me there aren't many of those big decisions that you have to make. But, every one of them is absolutely critical to the outcome of the battle. In most battles, from my experience at NTC, the brigade or battalion commander has about five or six of those big decisions he has to make. Not a whole lot more than that. If you can figure out what those decisions are, that's good.

The second thing that results from that, in my judgment, is that you end up with some idea of where on the battlefield those decisions will have to be made in terms of time and space which is also a good thing to know. The third thing that generates from that is there's some expectation of where you personally, as the commander, need to be positioned on the battlefield in order to see those things evolving with your own eyes. So you are not depending on a bunch of radio calls and a bunch of staff officer estimates and all the sort of things that take a long time to get to you. And frequently the information that you would get is absolutely correct but it is too late to make the decision.

The final thing that should generate from all that is having now understood the decisions you have to make, where do you expect them to happen, where do you have to be to make that decision? Then you ought to go back and share with your staff, the folks that are providing you with the information requirements that you need to make those decisions.

"Then you ought to go back and share with your staff, the folks that are providing you with the information requirements that you need to make those decisions."

If you are a thoughtful guy who can sit down and wargame in your head, you can come up with a whole bunch of

solutions to tactical problems before they are presented to you. And, if you are really good and take it to heart, you can also kind of rehearse in your own mind what the FRAGO sounds like that you'll give to your subordinates tomorrow. Then you don't have to fumble about and try to figure out what you are going to tell them to do because you have already figured out what the conditions are, what the condition of your force is, where the enemy is located. And you have rehearsed it well in advance with what instructions you have to give to your subordinates in order to keep a tactical emergency from happening or how to react to a tactical emergency.

I've got probably 70-80 rotations at the NTC. It is very seldom that I have seen a battle at the NTC where there wasn't some opportunity for the BLUEFOR to win the fight. There is some moment in the battle where the OPFOR has made a mistake or there is a possibility to take advantage of a window of opportunity. And frequently you don't recognize it was there until after the fact, when you lay everything out and say here's the bad guys and here's the good guys, and here's what was going on and here's what you could have done. Which is part of our training process. But, the important thing to me is that the opportunity is frequently there, you just don't recognize it.

4. See Yourself

The second observation I would give is we talk about seeing ourselves and we see the terrain. We spend a tremendous amount of time trying to figure out what the enemy is doing. We have an entire organization within our intelligence community designed to provide us with information about the enemy. Generally, we do a fairly decent job of focusing on the enemy. It may not be focused in the right place at the right time with the right information, but generally we know that the enemy gets a vote in the fight. It has always been interesting to me that sometimes we know more about the enemy than we know about ourselves. We don't know that Alpha Company only has nine tanks instead of fourteen. We don't know that Alpha Company has 100% of their basic load of ammunition but Bravo Company only has 50%. It is awfully difficult to impose your

"It has always been interesting to me that sometimes we know more about the enemy than we know about ourselves."

will on the enemy if you can't impose your will on your own organization. It's an interesting observation when units at the NTC don't

"It is awfully difficult to impose your will on the enemy if you can't impose your will on your own organization."

understand the status of their own organization, their own forces, in terms of people, equipment, and supplies. Which is really kind of fascinating because you would think you could get great information from your own by just asking for it, but there is so much friction between the tank crew and the

brigade commander and the reporting chains that intercede. It's just very, very difficult to get the information.

Which also requires the commander to make sure that he specifies exactly what he needs to know about his organization. And, it changes from fight to fight. Clearly, you always want to know what your combat power is. But if you are in an offensive operation and you are trying to do a deliberate breach, it would be really nice to know how many tank plows you have operational. Rather than be surprised by the call from the company commander at the point where he is getting ready to enter the breach and he says, "I am now dismounting my engineers to do a manual breach of the obstacle." Then the commander calls back and asks, "Where are your plows?" Well, they are back in the assembly area because they're broken or the tank that was carrying the plow went down at four o'clock this morning and we haven't been able to get it up. Something like that should be an absolute red star cluster that says there is a real problem here. But some really important things end up happening and getting un-reported or handled as only routine if you aren't careful.

That is a function of the commander not being specific in the things he really needs to know before the fight starts. And, when I say before the fight starts, I am not talking five minutes before LD. I am talking about twelve hours before LD because you need the time to influence and make corrections and adjustments. If you don't have the time to do it, then you might as well not have the information.

BRIGADIER GENERAL RUSSEL L. HONORE, 1998

5. Orchestration and Synchronization

I continue to observe art of command limitations of commanders. You look at the definition of battle command, within the first five words is the word *art*. The art of leading, deciding, motivating, to accomplish the mission using these available resources. Just a general paraphrase of the definition of battle command.

I repeatedly see people who don't fully optimize the art of their command in the execution of leadership and command. They rely on the science side. I've come to the hypothesis from recent observations, three NTC rotations this year and numerous other training events, that we've taught synchronization for a long time in the Army and a lot of our leaders are stuck on synchronization. Synchronization kind of deals with science, because when you look at a definition of synchronization it talks about the relationship of battlefield functions in terms of time and space. Well, time and space are kind of science.

The new doctrine calls for something bigger than synchronization. It calls for orchestration. Orchestration's definition leans more toward the art of what we do. It's the mixing and the matching at the right time. The problem with focusing on synchronizing is it suggests working sequentially vice simultaneously. In garrison we do a lot of synchronized activities that in truth are in most cases sequential events not simultaneous events. So if you spend most of your time in garrison and you go to an event like the NTC you probably bring over what works for you in garrison. You synchronize. Say Alpha Company's going to be here, Bravo Company's going to do this, Charlie Company's going to do this, Delta Company's going to do this and Headquarters Company's going to be spread over the three of those. The staff officer puts his hand up and claims victory. He's got it synchronized. The problem

*"So, we plan... sequentially.
Then we get out on the
battlefield and things start
happening simultaneously."*

with synchronization is how do you get synchronization and simultaneous operations inside of your formations?

And so again it goes back to art and science. The science gives you the basics to kind of get you in the ballpark of making the right decisions. But the art of orchestrating and the science of synchronizing need to accompany each other, need to complement each other rather than strictly relying on synchronization to perform the task. The old sequential execution is based on an old model we used to work from; we're gonna fight, we're gonna fight the enemy division reconnaissance, we're gonna fight the enemy regimental reconnaissance, we're gonna fight the enemy's CRPs, we're gonna fight the enemy's FSE. And it was a sequential laydown of how we fight the enemy. So, we go through and we plan *all* this stuff sequentially.

Then we get out on the battlefield and things start happening simultaneously. We're not only fighting the enemy reconnaissance, we're fighting the enemy's artillery, we're fighting the enemy's reconnaissance forces that were left over in zone, we're fighting the weather. So again, I think one of the pieces we need to work on and continue to tackle is the concept of simultaneous operations, simultaneous execution, and orchestration vice synchronization. Synchronization is the piece you start off with, the subpiece you gotta have to get to orchestration. But there's a leap from sequential to simultaneous. When you look at the battlefield, if you're fighting the enemy and you're fighting him sequentially, you won't be optimizing the opportunity to throw him off balance and wrestle the initiative from him. Because you're sequentially fighting as opposed to fighting simultaneously through the depths of his formation. So you say, OK it looks like we killed the first formation now let's go to the next formation. The idea is to cause chaos and confusion by fighting these formations simultaneously. Battle command focuses on that human orchestration of warfare.

6. Clear Objectives for Clear Intent

Subordinate to the human dimension of warfare is the command and control piece, those things that facilitate decisions. This is what people normally focus on. Battle command includes the art of deciding. So, the things that help us do that are command and control nodes. What they give us is situational awareness. Situational awareness increases the information we have to make decisions. It doesn't mean we're

gonna make the right decision just because we have the information. And a lot of people have gotten confused about that. It's because you think you *know* you're gonna make the right decision. I mean we see examples of that imperfect reasoning every day. You see the news tell people, "Hey its raining outside; there are puddles of water all over the place; there's a lot of traffic; traffic's going slow." You see people driving down the road and here is this nice, educated man and his wife with their kids being pulled out of the ditch. "Well what were y'all doing? Didn't you hear the news?" "Yeah we heard it. But we thought we could get through." So having information is usually a given. It's what we do with it is what makes the difference.

You can invest so much in getting information. Now, how do you take that and orchestrate that with your mission in terms of what you're trying to do, what the enemy is doing, and the relationship to terrain and weather? I'm more and more convinced, as I think about elements that can be relative to others on the exercise of battle command, of the importance of the leader and the people around him to pass available information. How do we present available information to the commander or the staff that's helping him control the fight? You only have one commander, and the people who are controlling it to present it to him have a big dilemma. In the armor and the infantry units, the commander is out on the battlefield in the fighting vehicle. Somewhere in the rear he's got a staff that's helping him and he also has his fighters, his company commanders, all of them on the battlefield with a steady stream of information.

The control and coordination functions that the staff work at must have clear guidance. Let me give you an example in CAS, Close Air Support. The commander is saying his intent: "I want to attack the enemy *early* with CAS." That's normally what they say - *early*. Well, early is like a goal. As opposed to the commander saying to his staff something that sounds more like an objective: "I want to attack the enemy with CAS when we cross Phase Line John." An objective is tied to time and it's measurable. And he then says, "I want," and he gives a location where he wants to reduce the enemy's formation. And he may say something to the objective: "the CAS is to destroy 10 enemy vehicles, combat vehicles." So now we're going from a goal to an objective. "I want to use CAS early, " isn't an objective. It ain't tied to time, it ain't tied to a type of damage he wants.

Commanders know they have to say something about CAS. But it's harder to state an objective. So he'll say something that's very general

and what he normally gets, when he states something that un-specific, is exactly what he asks for. The CAS shows up, it closes his artillery down, it's not focused, and it leaves or it doesn't get in the fight. The commander has not been specific in how he wants to use that weapon system to attack the enemy.

"So he'll say something that's very general and what he normally gets... is exactly what he asks for."

And what you will see is the folks who are better rooted and well-rounded in the art and the science of the business can formulate

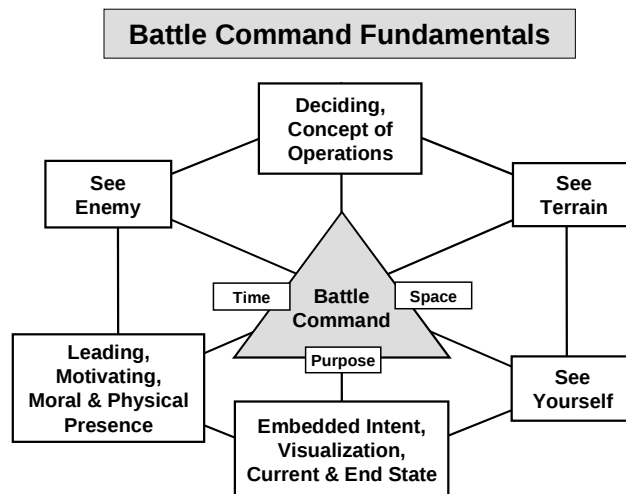
an objective for that weapon system. And they can force their staff. So, while he's out there dodging bullets on the battlefield, he's prompting his staff on, "Where is the CAS? How many minutes out? Is the artillery set? Do we have friendlies out of the way? Do we have the ingress and egress routes clear?"

The reason the commander is speaking in generalities and not making sure of his staff, because he's still ultimately responsible for what that staff does and what they focus on, is because he himself is not totally grounded in the application of that weapon system. So he speaks in generalities. But he's been taught in CPXs and stuff, he's gotta say something about CAS. And then, when the enemy has just totally destroyed over half of his forces, he says, "Where is the CAS?" So in the application of battle command, I see the inappropriate application of the art and the science of command is a frequent failure along with a failure to continually focus on seeing the enemy, seeing the terrain, seeing yourself.

7. Enriching Experience

My understanding of battle command became clearer to me after I was out at the NTC, through repetitive performance. I think the NTC provides first rate battle command opportunity through repetitive experience. I also attribute my understanding to education and great opportunities to teach tactics at Leavenworth, Knox, and NTC. I had a lot up in my head that just ended up being education. It's like the young doctor who's spent 10 years becoming a medical doctor. He's good, he's sharp, what he lacks now is experience. I think the combination of education and experience is what has given me a clear vision of what's going on. Also, I notice what I'm seeing, what I'm hearing, what I'm

not hearing. But I think that came together at NTC for me. It was a combination of this experience from being an instructor and participating in the review and process of writing of doctrine, and the experience from NTC, that I think gave me a much better appreciation for the concept of battle command. This is why you see all my stationery from now on, as long as I'm in tactical units... you see that emblem dealing with battle command. You see the enemy, yourself. You see terrain, time, space and purpose, embedded intent, a running estimate and visualization.



I think our challenge is how we in garrison utilize a system, and how we simultaneously articulate art. How do you make up for experiences people haven't had? We keep trying to approach that in the Army. Well, I don't know how to do it, but this is how we've attempted to do it. We're gonna build you some experience with simulations, repetitive simulations. The experience piece is very important. So you try to use simulation, repetitive simulation, to build experience. But the problem is warfare is a contact sport. And a lot of the simulation we have is constructive simulation. In other words, you put some artificial intelligence in the computer, you sit there and you look at a

"So you try to use simulation, repetitive simulation, to build experience. But the problem is warfare is a contact sport."

map, and the two forces come up. And in the constructive world if you have five and he has two, you win. Generally, if you have five and he has three, you might lose one, you still win. That's just the way constructive simulation is. BCTP is constructive. When you get into virtual simulation you have to actually shoot the other person, but you don't have physical contact. You get into the virtual world, you get into some of the more advanced technology. With the virtual world you're looking at the battlefield in the form of some visual media. You're not looking at a map. CCTT, Close Combat Tactical Trainer, is virtual. You're sitting there in your tank and you're looking through the screen and what you're seeing is the Central Corridor at NTC, it's virtual. So, we keep trying to create experiences and simulation to help people get experience.

The problem with repetitive simulation in the constructive world is that you can get very good at *constructive simulation*. And you can get very tired doing it, but it has yet to even come close to the dynamics and the friction of actual live simulation or actual live warfare. All we get at NTC is live simulation. And the best we can expect to get in our training process, through simulation, is process. So, for example, you know you want to shoot the artillery and you want to have the CAS. What you learn from process is that you have to have separation of either time or space for both of them to be used. Either you gotta tell the aircraft, "You're going to fly at this height and the artillery are going to shoot at this height." That way they're both occupying the same space at different places. Or it's going to be separated by time. The artillery's going to continue to shoot until 1000 hours and at 1001 the CAS is going to come in. So if you follow this postscript and go back to what I was talking about simultaneous vice sequential, what we're trying to do is get simultaneous attack where the CAS and the artillery are hitting the enemy simultaneously by utilizing space.

The way amateurs do this is they shoot the artillery then they call the CAS in. So if you were the enemy you'd say, "Oh the artillery's coming in, the artillery's finished. Oh OK, here come the aircraft." Better if they have to fight both of them simultaneously. You get a synergistic effect where the enemy's trying to run from the artillery and the CAS simultaneously. And when he's running from the artillery, that means he can't shoot at the aircraft. So the aircraft come in and are safer and more violent and thereby execute the task. Then, oh by the way, you got ground forces simultaneously attacking him.

That's how we get the synergistic effect on the battlefield. And that's not a word we've used, "synergism," in the Army in terms of the application of our warfighting capability. We've always used the word "mass" as a way to articulate where we're talking about simultaneous attack. How we mass combat power? So how do you mass combat power? You've got to have simultaneous attack. The way to do it is you attack this formation with artillery and you might be attacking with CAS. And you might be also attack with EW while attacking by direct fire. All this is happening simultaneously.

"You get a synergistic effect where the enemy's trying to run from the artillery and the CAS simultaneously. And when he's running from the artillery, that means he can't shoot at the aircraft."

As I continue to study battle command, and get back to and think about some of the lessons learned, it still hinges on the ability of leaders to tell folks and to lead them as to what they will do. And then actively supervise the execution. I see a big, big, big problem in the Army now - failing to supervise the execution.

The senior leader is still expected, once he gets synchronized and he gets simultaneous things going, to supervise. He still has to supervise the execution. That's one of the lessons out at NTC. People can say anything, doing it is very hard. Can you do what you advertise? And in most cases, most of us can't do everything we advertise, particularly from a unit perspective. So our commander at the last NTC rotation, he would come in with some great stuff and all that at the rehearsal, but most folks around there weren't trained well enough to execute that.

Institutionally, I think the Army knows what we want to do. What we lack is the amount of experience to do what we say we can do. And the opportunity of cyberspace allows us to do a lot of that and to reinforce that we *can* accomplish these things with precision. But, as I and other OCs at NTC experience, what we saw over and over again, is that even when people can do what they say they are going to do, the challenge is that the enemy's got a vote in this and the terrain's got a vote.

This concept of supervising execution as you look at it, it evolved, it just wasn't invented. And you go back and you look at some of the great battlefield commanders, Napoleon, George Patton. They all had personal presence on the battlefield. They were out seeing what the hell

was going on. They were not sitting back in their office. Now I think that presence is good for two things. It's good for the soldiers to see. But I think that's secondary to actually getting a feel for the tempo and the hell that's being raised based on the decisions you're making. And I

"...presence... It's good for the soldiers to see. But I think that's secondary to actually getting a feel for the tempo and the hell that's being raised based on the decisions you're making."

think that's what people expect of us, to be out supervising the execution of the task.

But too many commanders, too

many, they're not using any of their senses to supervise. Their hearing, for example, they don't necessarily listen to their own radio net when they're not in the fight. I've seen some of them come in to the TOC and sit down, and their staff is briefing them, and they tell them to turn the radio down so they can hear. And what they're missing is the scouts from one of the subordinate battalions is calling in with the enemy location, but he's told them to cut the radio down so he can hear what this captain is about to tell him.

You should use all the assets available to you. Now we even have a system call the EPLRS, Enhanced Position Location Reporting System. On the EPLRS screen you can see where all of your vehicles are in your battalion. And each battalion's got one of those screens in the battalion CP. But I've seen battalion commanders with that who still don't use it. So, supervision in the Army and seeing the battlefield means more than your subordinates telling you what's going on.

I think any of the elements of battle command deserve attention and you steadily run across stuff on battle command. But my further

observation would be the Army hasn't really totally embraced this concept. We have people that say the word, but what they mean when you hear them talk is C2, command and control.

"Army battle command doctrine, is descriptive, it's not prescriptive. ...because we want human intervention. We want commanders to make decisions."

Army battle command doctrine, is descriptive, it's not prescriptive. The reason why we've always maintained that is because we want human intervention. We want commanders to make decisions. They say, "This is why

Brigadier General Honore

I'm doing this based on the enemy and the terrain," vice a checklist that comes out of Leavenworth. We want them to be active in the decision.

But in actuality, when most people say battle command all they're thinking about is *stuff*, things. They're not thinking about the concept and the art of executing the mission, and the requirements of supervised execution.

**BRIGADIER GENERAL (R) HUBA WASS DE CZEGE,
1999**

8. Carousel of Deception

We talk a lot about the value of deception - how we, through deception, can throw the enemy off balance and gain a great victory at relatively low cost. I learned a valuable lesson about deception when I was commanding a task force at the Yakima Firing Center in Washington during a Brave Shield 16 exercise, back around, I think, 1977.

We were sitting on a hill mass overlooking a desert valley with another hill mass to our front. To the left we had a wide-open valley and to the right we had a very deep canyon. The canyon had one trail through it. You could drive single file down, wind your way down into the canyon, and back up the other side. And by doing that you could get around onto the enemy's flank, if you wanted to attack.

We had the mission to attack. As I looked at my situation, there were three ways I could do it. I could maneuver around to the left, into this wide-open valley. It was good maneuver ground but it was wide open. You could be seen from miles away. Or you could go straight ahead. If you went straight ahead you went right into his defenses. Or you could take this risk and go down into the canyon. If he spots you, you're trapped. But if he doesn't spot you, you could hook into his flank. So that was pretty attractive until I began looking at it.

I said, "Ok, I think what I'm going to do is - I'm going to make the enemy think that I'm going down into the canyon." I'm going to have a feint to present the story that I'm going into the canyon. I will send a small force into the canyon but make it appear that the entire task force is going in. Then I'm going to have the small force attack from the flank. And when he's distracted from that, then I'm going to roll straight ahead very quickly across the valley and straight into him. And hopefully he'll be focused on the other side.

So how do I do this? I found that if I get the engineer to make a little cut at the lip of the canyon, then I could drive some vehicles in full view to

"Go around the hill enough times to give him the picture that it's the whole task force going into the canyon."

the lip of the canyon, then hook a right and go around the hill again. Go around the hill enough times to give him the picture that it's the whole task force going into the canyon. I figured that after dark he'd have his radars up and he'd be watching what I was doing. This area was very easy to track with radar. It's a direct line of view. There's no way to get into the canyon without him seeing you for about 3 or 4 thousand meters so he could count a lot of vehicles going by. Also there was a risk of artillery but you could smoke that partially. Anyway, you could really demonstrate what you were doing.

So I decided to take all the TOW tracks, which wouldn't help me in the attack, and the VTRs. On radar they would sound like tanks. I was a mixed armor/mech task force so I put together a composite force that would look like three mech/armor teams going into the canyon. So we put that force together and surely enough they rotated around the hill three times, down the lip, through the canyon, up the other side, through some rough ground on the other side and they attacked from the flank.

When I heard the sound of the attack, and the time was about right, I said, "Forward, charge." We called the companies and we dashed across ground and into the other side. With great success. We didn't have any trouble coming up through the hill, met very little resistance until we were fairly well into the hills, several kilometers on the other side.

It was about that time it began to dawn on me what was happening and what had happened. What had happened was that the enemy didn't give us any resistance because he was asleep! We hadn't fooled anybody. They were just asleep. And the radar operators were asleep. They just didn't expect the attack at all that night.

It dawned on me that you can go to all this trouble and all of the expense to try to pull off a deception when all that's really important is to create ambiguity. You need to be sure, if you're going to go to all this trouble and expense that the enemy is really reading the message.

"At the tactical level, creating ambiguity is a lot more important than trying to create a deception."

And if you have no way to check whether he has picked up on it, then you're taking risk. So from that time on, whenever anyone has talked to me about "Well, let's try to deceive the enemy," I thought about that event. It clarifies your

thinking. Is doing this really worth the expenditure of resources we're putting into this ruse or feint or deception? I've come to the conclusion

Brigadier General (R) Wass de Czege

that, at the lower tactical levels, it often isn't worth the trouble. What's really important is: not to present him a pattern of operations that he can read and predict; to try to be different; to try to be fast so he can't read it until it's too late. What I'm really talking about is, at the tactical level, creating ambiguity is a lot more important than trying to create a deception. When you expect the enemy to actually do something, you have to know when he's done it. And you have to have an alternate plan in case he hasn't done it.

COLONEL GEORGE BOWERS, 1998

9. Follow Your Heart

The frame of reference is February 94, NTC. I was battalion commander of the armor task force. We were balanced: two armor and two mech. It was a brigade continuous ops mission in the Central Corridor and we were attacking from east to west. It was planned over a 36-hour period. I was in the southern part of the Central Corridor and the other task force was in the Northern Corridor. We were echeloned left. The mech force was the main effort; I was the supporting effort. He was also a balanced task force: two and two. We were conducting a movement to contact on a brigade level and we moved through the Central Corridor until we got to about the north-south grid line on the 876 complex.

The mech task force commander reported on the brigade net that he had made contact with the forward security element which would indicate that their intentions were to stop him in the northern part of the Central Corridor around the Iron Triangle. What we did not know was that the forward security element had split. A portion of it had tied him up and another portion had moved south to meet me. About 2 kilometers before the 876 complex my intuition, after having been in the National Training Center for the better part of 11 days, told me to go 90° and go behind the mech task force. I don't know why. I don't know why I felt that way. But given the combat situation at the time and the reports that I was listening to on the radio in my tank, my Charlie company, the lead company, had got right out and made contact with the FSE. So I had three companies that had not been engaged at that time.

I didn't do that. Within about 15 minutes, the 1-8 Task Force had been attrited down. Not only had the forward security element done what it was supposed to have done, the advance guard main body had started to work its way around the Iron Triangle along the road complex that hugs the high ground on the north side of the Central Corridor. At the end of that fight, which was about another 45 minutes, we were attrited down to less than 50%.

Had I taken that intuitive thought process and executed, we probably would have tied them up at the Central Corridor. It would

have been a one on one and it would have been a stalemate against the regiment. What ended up happening was the better part of two MRBs bypassed us and kept on going deep. The lesson learned out of that is, as a commander, sometimes there is not an empirical *why* or justification or scientific rationale for making the decision, it's just

"Sometimes there is not an empirical why or justification or scientific rationale for making the decision, it's just gut level feeling."

gut level feeling. In my 23 years in the Army, and I've done little above brigade level in 23 years, all I've done is command soldiers or been around soldiers. I've been lucky. I have always found that 9 times out of 10, the

more experience you have with soldiers, the more time you've been in the field, or in garrison for that matter, your intuition is more right than wrong. There is calculated risk in choosing to go with or ignoring your intuition. But because of the experience level that you have in the field and the situational awareness you have at the time, your mind and body may be telling you to do something at odds with the expected action. You've got to be smart enough to trust and execute on what your mind and body are telling you to do.

It is kind of analogous to golf. You hit a drive down the fairway. You're about 150 yards from the green. The wind is in your face, which adds a club length. Your mind tells you to hit a 7 iron. But your eyes tell you, and the sense that you have with the wind in your face tells you, to hit a 6 iron. If you listen to your intuition and it says hit a 6 iron, 9 times out of 10 you will be correct. If you go with what you think you can do, then 9 times out of 10, you're short. That's the same process that a commander feels on the battlefield. You can't touch it, you can't smell it, you can't feel it. It's just there and you can't explain it. It's the same thing with watching soldiers in the field and you see an accident waiting to happen. Say, soldiers are moving across the field, they may be riding too high in the turret, he may be going too fast, and then all of a sudden you pan around and you see another situation. You've got two choices, let it go or run down real quick and stop it and correct it. You know that given human nature, 9 times out of 10, you may have an accident waiting to happen on your hands.

If you are in a situation like that, then you need to do what your heart tells you to do because it is probably right as opposed to trying

to bear down and keep on track with the plan. I was getting feeds over the radio from the mech commander telling me they had held up the forward security element. I was getting feeds by listening to his company commanders telling him what they were doing. I was not getting anything. The option to that would have been to continue the attack in flank but I didn't have anything out in front of me. My intuition was to come and try to go around to his flank on the north. We would have had to choke down, but we may have been able to flank them on the north because they wouldn't expect that. They would expect you to make a wide turn. That's just something I've thought about all these years. I wish I could have done it differently.

10. Picture of the Obstacle

We're now in the bubble where Force XXI is starting to show us what possibilities are out there with technology onboard. Helicopters are able to take pictures day and night, having the FLIR, having the optics to be able to see farther, satellites. When I was at the National Training Center in May, I was commanding the brigade in a live fire operation. The SP was around Arrowhead. 1-7 CAV was one of my task forces, the Division Cavalry. We were going to conduct a passage of lines around Drinkwater, just west of Drinkwater Lake. The battle handover line was about 2 kilometers past Drinkwater Lake.

Right at where they normally conduct a defense at Drinkwater, which was along the high ground, was where we had the TAC. I moved up through and co-located with my S3, FSO, my ABE, and others. We had the 1-7 in front. They had Kiowas flying. They had eyes on the obstacle, deep in the Northern Corridor. They also had the AMPS box which has the capability for the Kiowa to take a picture and pass it back through Vtel and then it will come out hardcopy and you can make an assessment of it.

I did not get to see that picture. But somebody back in the 2-12 Task Force, which was following and was going to conduct a passage, saw it. There was some discussion for about 10 minutes that there was a 100-150 meters of nothing but wire on the northern part of the obstacle. In the southern part of the obstacle were tank ditches, wire, and the assumption is they would probably have mines. Again, my intuition said go to the north because you have the least amount of resistance and also, anytime you are conducting a movement to

contact or deliberate attack, momentum and mass are key. In my mind, I let somebody talk me out of it, and we went south. And, 4½ hours later we got through the obstacle and then we went on down

“...about 150 yards of nothing but wire that was open in the north, and all you would have had to have done is run through it with tanks.”

through. When they showed us the picture the next day in the AAR, it was plain as day. About 150 yards of nothing but wire that was open in the

north, and all you would have had to have done is run through it with tanks. I hadn't seen the pictures.

That vignette taught me that you need to change the paradigm, you need to plan for technology. You need to get commanders to where they know the capabilities and practice with it before you go to the field. And you need to *trust* it so that when you have to base a decision off of a picture, that it's current, it's valid, and that whoever took the picture, how he's positioned, knows what you're trying to achieve. This is a bold assumption, but I would say that we would have reduced our time going through that obstacle by 3 hours. There was a company in the north, but we just did not trust that technology because we had not trained with it very much. We knew the capability. I pushed very hard for three months to get it in. My S2 knew about it. But we got so overwhelmed with moving the task force through battle handover, getting them through to where you had the forward passage of lines, that we didn't *stop* to assess.

There needs to be an assessment period and commanders need to understand that assessment period. Where are we? What are we doing? Is it the right or wrong thing to do? Do you have the right combat ratios? Do we have a little bit of time to make this assessment? We have always taught that. But in actual execution, commanders are pressured to keep the momentum going. Sometimes when a subordinate commander wants to take just a minute to assess, unless he is very strong, he's bowled over and has to continue. In my

“Sometimes when a subordinate commander wants to take just a minute to assess, unless he is very strong, he's bowled over.”

case, I heard about it, I sat there and thought about it for about 10 minutes, and then I'm actioned to the southern part of the obstacle. There was a

discussion with the battalion commander who had seen it, and he said I think we still need to go to the southern part of the obstacle. If I had seen the picture, and seen what I saw the next day, I would have said, "Nope, we are going north."

11. Simultaneous Attack

It was a live fire brigade defensive mission. 1-7 was in the northern portion of the live fire corridor, the Drinkwater corridor, and 2-12 was in the Alpha-Bravo Corridor. We had Kiowas that were covering the entire front of the brigade sector, and we were focusing on the Leach Lake Passes that fed into the Northern Corridor. The way the targetry is set up, up there, they will start to present themselves on the other side of the high ground to represent a forward security element or a combat reconnaissance patrol depending on what you have done to them with deep fires. If you take out their CRP initially, then they will change the targetry to represent that they had to re-form CRPs and they're coming in blind. If they come in and they're successful with their CRPs, and the night before the reconnaissance elements that are out conducting counter-reconnaissance are unsuccessful with taking out anywhere from 2-4 CRPs, then they come in so they have mass.

In this particular mission, we had been successful in the north. We had identified the forward security element. They had a Kiowa Warrior on station, right at the mouth of the passes that came in and fed into the Northern Corridor. Artillery was set. 1-7 was conducting a rearward passage of one of their Cavalry troops. Up to that point, I had not understood what was meant by simultaneous attack.

I had indirect fire. I had Kiowas that had not only the capability to lase from 8 km out, but I also had Hellfires and I also had the FAC, which allowed me to control air sorties into a target. When you do your course of action analysis, you identify named areas of interest where you place eyes, either Kiowas or COLT or Scouts, to watch those areas of interest. The intent there is to try and track enemy that advance from a certain known point into your sector and then through your sector. That gives you time, if you do the analysis correctly, to determine their speed, what type of vehicles, and which direction they are going to come in from so you can then react to deepen your sector by moving units around into either hasty prepared positions or prepared positions in a defense, to thicken the battlefield, if you will.

What happened here is we had the artillery set, we had the Kiowas on station, and we had identified the targets. Then the Kiowa pulled off station, so we didn't have a good accurate read on the forward security element. We were late with the artillery. The air that we had on station did not initially engage, so we did not have a very effective engagement of deep fires on the initial elements that were on the other side of the mountain complex. What I learned out of that scenario is that when you are in your planning stages, you take your named areas of interest, you look at the types of organizations you may be defending against, what type of structure they will have based on the ground, and then given that, when you watch them come into a named area of interest, you can turn that into a target area, a TAI.



What the Kiowa gives you the capability to do, with their 8 kilometer stand-off lasing capability, they can lase the initial targets and feed a 10-digit coordinate back to the artillery. The guns then prepped and are prepared to fire. At the same time they are preparing to fire, you've cut an ACA, and you can plan an ACA through that TAI. That then allows the air force to come in on one part of that box

“So, you’ve got simultaneous attack on both sides of the column...[and]... three forms of lethal fires going into a box.”

and drop their bombs or shoot while the artillery is coming in from the other end. So, you've got simultaneous attack on both sides of the column.

And oh, by the way, if in a defensive role (because you never want to use the Kiowas in an offensive role) he can fire Hellfire initially to back out and give an initial stunning blow so that you have three forms of lethal fires going into a box. That has to be planned, but it can be executed if you think through the process.

And that is the lesson I took away, that will never leave me because if you can talk it through... Are they going to come in a column? Are they going to come two up? If they are coming in a column, then the Kiowa lases the initial vehicle, he fires the coordinates back to the guns. The guns are set, they begin firing. The Kiowa fires the Hellfires, and in turn the FAC, or someone else, then can also get the 10-digit coordinates for the Air FAC. He can then bring his air into the trail end of that column. So, you have massed fires on that column initially and then the Kiowa may come back in on station, make a BDA and then feed it back. But that has to be rehearsed all the way down at the rock drill, so everyone understands the vision and the concept of the operation, so when we execute it, it can be executed precisely.

We were able to execute it in the evening right before dusk. We got close. The timing was off a little bit but we got close. That is another vignette that talks technology and its capabilities, because the brigade has the one fight. If you have a brigade commander who has two task forces, he can't be a super battalion commander. He has to take the assets he has available, air, helicopters, artillery, and he has to set the conditions for the deep fight. So that when he passes the battle to the battalion commanders, he has attrited the enemy to some degree. He has slowed their momentum, and he has caused them, in a defensive scenario, to piecemeal into a defensive fight so that the weapon systems he has that are vectored into an engagement area can kill precisely. They don't waste ammunition and they're not overwhelmed and overmassed.

*"A brigade commander
... can't be a super
battalion commander."*

It's tough. We often wonder why guys like Abrams, Patton, Eisenhower and others were so successful. But what I think we forget sometimes is that they went over the same ground again and again, and knew and understood the ground. The ground doesn't change. It hasn't changed since Napoleon. *Then* they were able to understand the technical improvements of the time, the tank, the artillery, the air, and

how you combine those and mass them. They were most effective because they capitalized and leveraged the technology. But they also understood the ground out there and the relationship between them. Sometimes we want today's commanders to be intuitive, to make good decisions, but that only comes after *repetitive* training. I think the more time you spend in the field, the better you get at your fieldcraft and the better you get at your decision making process. You simplify it. We get hung up in the MDMP with process instead of what we want to get out of it. Until we get through it and hone it

"We want today's commanders to be intuitive, to make good decisions, but that only comes after repetitive training."

down it's not effective. And most times out of a 14-day rotation, you'll find that what

we start with and what we end up with is like night and day. We cut out the extra and go right to the heart of what we really need to allow us to make decisions to kill the enemy. I think you get better and better at that the more you stay in the field.

My first rotation as battalion commander we spent six months and we trained all the way through to brigade level out in the field. This last rotation we did platoon lanes, company lanes, some form of link lanes with company commanders. We did Janus with battalion. We did not conduct battalion task force maneuver because we didn't have the space and we did not do brigade maneuver. Simulation, CCTT, helps to get at synchronization. It doesn't replace the field, but it does prepare decision-makers to, in a repetitive process over either NTC ground or European ground, to confront the decisions they will constantly be challenged with, to prepare them. Then, when they go to the field, they are in that mind-thought process. That way of thinking that you end up progressing to in the field which allows you to make those quick, intuitive decisions because you've gotten accustomed to it. Finding ways to give commanders those effective tactical command experiences is always going to be the challenge.

COLONEL JOSEPH FIL, 1998

12. Leave OPFOR Tactics to the OPFOR

You remember every battle out there very distinctly. I've got absolutely lock tight memories on every one of them. So let's look at the first two. One was a very tough battle for us and the second was still a tough one, but we were successful. Unsuccessful in the first, successful in the second.

First mission was a movement to contact. It was Central Corridor, we were coming from the west to the east. It's a battle that we had fought through intellectually many, many times and wargamed extensively. And we knew how we wanted to play it. This is one that you fight in your dreams, over and over again. We had developed a course of action, a prototypical course of action, at home station, by wargaming before we ever deployed, on generically how we wanted to fight an enemy who is trying to find, fix, and destroy us. How would we do that to him? And we knew what the combat power ratios were going to be. So we thought how to apply something that we had intellectually thought through.

As the fight proceeded, we found that what we were unable to do was to fix with a minimum piece of combat power in order to achieve a flank, and to destroy with a second so that incrementally we could go back to the next echelon (because the enemy fights it in echelon with a bigger and bigger piece). He was able to do to us what we tried to do to him.

"We were unable to ...fix with a minimum piece of combat power in order to achieve a flank to destroy with a second."

That was to fix, with a very small element, our advance guard with his FSE. And then he brought in his advance guard battalion to destroy that and then quickly fix the next echelon, which was our advance guard battalion.

He is very fast on his feet. We tried to fight it the way he fights it. He fights with an incrementally larger element of combat power. He finds with the smallest he possibly can, fixing with the smallest that it will take to get that element fixed, quickly bringing combat power to

destroy it, and then fixing the next one. So it's a sequential fight, and he's faster at it than we are.

We raced and we were able to get very quickly through zone. But we got fixated on speed, rather than the relationship of our forces to his and to terrain. Because he knows the terrain better and fights this very fight every rotation, he does a very skillful movement to contact. The difference is that he goes west to east or east to west, but he goes the same place automatically each time. So, there are some advantages he has but we knew that going into it.

The lesson learned is, you can't just fight the OPFOR the way the OPFOR tries to fight you. And when we go back this next year, our tactics and our course of action will be very different. We should not worry about all those first incremental combat reconnaissance patrols, forward security element, advance guard company, advance guard main body. What we must do is go for the jugular immediately, and try and go very deep and go after his main body. The rest of the stuff we can fight it as we see it. Don't just adopt the OPFOR tactics because they work for him. They may not work for you.

“Don't just adopt the OPFOR tactics because they work for him. They may not work for you.”

For this mission we had a plan to bring in all the combat multipliers. And we wargamed extensively since the course of action was already in our mind. That

was, we were going after the enemy not after terrain. We were going where he was, as opposed to where the graphics said we should go, and then we'd mass combat power. The air was going to go deep after the main body. The artillery was going to go closer to the advance guard, direct fire. In other words we were going to fight it in echelons and separate all the pieces. The first time out of the box, the first battle, it is hard to do all that. It didn't work as well as we wanted it to. He brings, we call them “forms of contact,” his combat multipliers: NBC, electronic means, close air support, artillery delivered FASCAM. He brings those on very, very quickly. They get you de-synched before you know it. We planned for that. We knew that was coming, but it's hard to do on the first fight. Lesson learned is you don't necessarily want to do things just the way the enemy does it, number one. Number two, if

the main event is to destroy the main body, that's probably the way you want to go.

13. Shaping the Battlefield for a Flexible Defense

The second fight was different. It was a defense in sector. Again our orientation was to the east. We were defending in sector east to west. That's another one we thought through because the sectors have gotten wider. Zones are narrower than they used to be, so you're attacking with less space than you used to have which gives you fewer courses of action. Sectors are wider which gives the enemy more courses of action. And this is good, these are healthy changes to make it a difficult rotation, the way it should be.

We had thought that probably the best way to defend was to have a covering force deep. This would not only attrit the enemy but also give us a lot of battle space to shape. Then we could fight the main fight farther in depth in our sector, farther back. But also, we might be able to deny him some of the courses of action he had. You take a sector that goes from the Drinkwater Valley down to Central Corridor, or Drinkwater, Echo, Central Corridor and Hidden Valley. Include all of those and part of the northern part of Siberia as it comes into John Wayne Pass. There are a lot of things you can do there, especially since the enemy doesn't come the same way with everything he's got, Task Force Angel and Avenger and all the rest of his guys.

We knew that was a possibility. We developed a course of action with 1-12 out front. What we wanted to do was show strength in some places, show weakness in others, deny some avenues with dismounted infantry, FASCAM, a big heavy obstacle effort. And without tilting our hand, we wanted to accept the penetration through the Brown Pass. We would accept it also through Debnam Pass, although not as good. We preferred Brown. And, if all else failed, we'd fight them as they came through the Colorado. We would have planned, rehearsed contingency actions for all of those. We wanted to have a reverse slope defense on the western side of Brown Pass. The end-state was, we wanted to be able to mass the combat power of four company teams on his main effort, and to have the inherent, rehearsed flexibility to accept the fight wherever he penetrated.

Late the afternoon before the defense, we recognized that the boundary we had been given in the north had moved further north. So now we had the additional challenge of not only Echo Valley, but the full Drinkwater Valley and the Leach Lake passes coming into our rear with Alpine Pass. Basically we had a plan that was very, very flexible; every company team had at least two battle positions that they were to establish, not always digging in, but they had to find wadis and develop the engagement area for at least two battle positions. That allowed them to mass the combat battle power of these four or five companies in two or three different areas based on how the actual fight progressed.



It worked and we stopped them. 1-12 Cavalry shaped the battlefield initially and caused them to come through Brown Pass, just the way we wanted them to. 1-5 Cavalry had a very, very agile, mobile defense in depth. He moved companies around to stop penetrations, mass fires, took them down to nothing. It was a great fight.

The lesson learned on that one; you don't know where he's going to come. You can deny him a few courses of action but his plan is based on retaining multiple flexible courses of action so that he can make decisions as he fights it. While the terrain lets you know what those decisions are likely to be, where he's likely to make them, you just have to accept that. You can deny him a few of them, and you can help him to go where he wants to go by putting a heavy obstacle effort where you don't want him to go. If you're not too obvious about it you can shape the battlefield and accept the penetration where you want it. Then move company teams around and think through all the triggers and timelines used to get them moved around. Have a flexible fire plan that

you can move based on predetermined decision points, with friendly and enemy criteria already thought out. Through the wargaming process, you can figure we may have to fight it

here, or here, or right here. So, how do we mass direct and indirect fires and all the combat multipliers? Also, it's the second fight, so you are starting to get better synchronized and C2 systems are working.

"You can help him go where he wants.... If you're not too obvious about it you can shape the battlefield..."

COLONEL BENJAMIN FREAKLEY, 1998

14. See the Terrain to Assess the Terrain

I learned a lesson as a Battalion Commander. It's paid often in spades since. And the lesson or the learning was from failure, abject failure. I was commander of 1-5 Cavalry, out of the Second Brigade of the 1st CAV. It was towards training day 13, towards the end of the rotation, and normally by that time units are coming along really well with their training. We had a very good train-up. We were a balanced task force, two tank companies, two Bradley companies. Our mission on the first day was to attack and penetrate an enemy forward defensive position with the idea of continued attack on the next day to complete the destruction of the enemy's second defensive position. This attack was coming from north to south. The piece of ground at the National Training Center, the final objective, would be what is referred to as the Whale. To get to the Whale we were going to have to go over the top of a ground called Siberia, very broken, very disrupted ground.

A contributing factor to the poor decision I made was fatigue. The battalion was centrally located up along East Range Road at an assembly area. Our battalion was to be the lead battalion of the brigade to go over the top of the northern side of the ridge at Siberia, attack down the south side of Siberia, penetrate the enemy, and if successful, the second battalion would go through us and continue the attack to destroy the enemy at Furlong Ridge. Then we would continue the attack and take the Whale. That was planned for the 13th. It was an abject failure because we really failed to appreciate the ground. That's what

the real lesson was as a commander. When the staff is briefing and you are getting all this information given to you, to really take the time to

evaluate the terrain is difficult. And I knew. I have a great background in operations, so when they say people don't pay enough attention to the ground, I'm always saying, "I pay attention to terrain,

"...when they say people don't pay enough attention to the ground, I'm always saying, 'I pay attention to terrain, I'm not one of those.'"

I'm not one of those." But, I just kind of allowed the staff to brief me on the terrain and as a commander I didn't really embrace and think about and get really involved in the ground.

So, believe it or not, we planned, even up to doing, a *battalion* level breach. We knew the enemy would have a lot of obstacles forward. And on broken ground like that, where it is all running

"...it's preposterous to think you would even attempt a battalion breach, but that's what we worked on..."

north-south and your whole formation is going to be broken up and you are going to be forced down wadis, single vehicle wadis, it's preposterous to think you would even attempt a

battalion breach, but that's what we worked on in rehearsals, and that's what we said we were going to do.

For the reconnaissance, we did not go forward because from where I was in the assembly area, I could see the ridge we were going off of and I had reconned that ground before. I just didn't make the logical in-depth assessment. I took it for granted. I didn't make the real logical assessment of... Wait a minute, this is a decentralized attack, we need to get up and attack through the wadis and then have a subsequent objective for orientation where we reorient and then continue to attack. I took the ground for granted and lost the fight.



What happened to us is that we went up the side. The first company got up there, really didn't have a good appreciation for the

enemy on that ground, couldn't see the enemy. First company died pretty quick coming across the top of the ground. The rest of the battalion kept going, got into the wadi systems, started to get disorganized because the plan didn't really take into good consideration the ground and literally we were defeated handily by the enemy. We probably killed maybe a company but the whole battalion was destroyed. The next battalion came up and tried to get something going off of what we had done. They didn't have a good appreciation of the ground and the brigade attack ground to a halt before it really even matured. So, the point that I learned and that has stuck with me is, regardless of the fatigue factor, if you are the commander or the operations officer, you really have to get eyeballs-on, hands-on, get-on-to-the-ground, really look at the ground.

It's something that will affect us in the future because our young officers really rely on technology, in particular GPSs. And they don't spend a lot of time really evaluating ground. They just watch the GPS screen and go from Point A to Point B. Whereas a lot of folks have walked the ground, driven over the ground, map in one hand, eyes looking at the ground. Also too, with the advent of Force XXI and all the feeds we are going to get from computers and UAVs and other type of electronic means of transmitting data, they are not going to take the time to appreciate the ground. So I find myself now, as a result of that lesson back in 1992, putting the brakes on when I am being briefed about ground to get up and to look and see how the terrain really is going to effect the operation and what's going to be done.

15. Critical Forward Check

Now as a brigade commander, I'll tell a story about the importance of checking your instructions. The brigade had made an attack and our next mission was to defend. The defense was to be from Granite Pass at the National Training Center down along the Iron Triangle across the top of Hill 876 and 780, down to and including Hidden Valley. The brigade staff had really done an excellent job of putting all the actions into motion to get the brigade to transition from the offense to the defense very rapidly. HET and HEMTT transports were early, were forward. We grabbed guys from the offense, brought them back. We had class IV moving up before we even gave the operations order to put in barriers. I met all the battalion

commanders on top of the Iron Triangle so I could give the defensive order overlooking the ground they were going to fight from. Bright day, it was about 11-12 noon. It was a bright clear day to see the ground.

We had an airborne battalion with us. Up around the Granite Pass was where I was going to put the airborne battalion. So, I was going to put a Bradley company and a light company up there. Then, the main effort of the brigade was going to be right around the Iron Triangle. The supporting effort was going to be 3-8 down in the south. We had put together the brigade barrier plan and had said these are the belts where we are going to put the brigade obstacles and this is where the brigade fight is going to be. I pointed out that forward of this, along north-south Barstow Road, we would use our close air support and our artillery fires to destroy the enemy out there. Then the barriers that they first hit, they would be brigade barriers, and beyond that were engagement areas that the brigade would use to engage the enemy in. I had no intent at all for direct fire from the battalions to be in those engagement areas.

We typically do a backbrief in the brigade and I asked the battalion commanders if they understood the task and purpose for their units, and did they understand what they had to do. They said, "Yes, sir." In our backbrief we go over the task organization you have been given. What is your task and purpose, and any special assets that you have been given? So, for smoke, or chemical reconnaissance, or if you have been given a COLT to work your area, you tell me why. You understand from the order I have given you why I have given you those assets. So, they were clear on all that. They had what they were going to do.

I let them go, and they moved out rapidly. And, as I said, concertina wire mines, class IV and V was already coming forward. So I waited about two hours because I had told the battalion commanders, even before giving their orders, I wanted them to get out in the engagement areas where they wanted to kill the enemy, and get their company commanders down there and start developing engagement areas while we had daylight. This was November/December rotation and it got dark about 1700 every day, so we only had about three to four hours of daylight once we gave the order out for them to operate in daylight. So they were all out there working and I let them do their thing. I went back and checked some things in the brigade and then I went out to check the progress. I

went to the main effort first. He clearly understood what he had to do. He had developed his battalion engagement area. He had placed his companies, and was constructing obstacles. That was 1-9.

Then I went up to the 501st Geronimos and I talked to them and they were pretty much squared up. I had to tweak their plan because the battalion commander wanted to have the Bradleys counterattack into the enemy's flank, but I wanted him to hold their defensive position and force the enemy into the main engagement area of the brigade. I didn't want them to be very mobile. I wanted him to make the enemy come to where he wanted to kill him.

Then I went down to 3-8, and now it's dark. They were defending the brigade obstacles. They were way forward. They were 3 to 4 kilometers in front of where we really wanted to kill the enemy in the north, and they were really shooting the direct fire into the brigade engagement area. Had the enemy come in to where we wanted them to

"They were way forward. They were 3 to 4 kilometers in front of where we really wanted to kill the enemy..."

come into, 1-9, they would have had an immediately assailable flank into 3-8 and ruptured the brigade defense because they were so far forward of 1-9. The battalion commander had issued his order, given his instructions. His guys had been working for hours. They had started to build obstacles. And, I said, "Too bad. You're changing."

Our doctrine talks to us about supervising as part of troop leading procedures. You issue the plan and then you supervise the plan. So, here's a case where because I followed the doctrine, and went out and supervised, we were able to pull it back together. The next day when the enemy attacked, the enemy initially came in where we wanted them to come in, but because the defense was so strong there, his advance guard battalion was destroyed. So he then decided to come south into 3-8's sector of defense and 3-8 destroyed the enemy. It's the first time in my ten years of going to NTC where the OPFOR commander came in a van to me and said "I attacked you but you destroyed my regiment."

The other thing that was very good by 3-8 CAV, is that the obstacles they were putting in reinforced the plan anyway. They just fell back behind those obstacles and continued to kill. So, the obstacles contributed to the plan and thickened the obstacle belt. But by them coming back and getting set, they were able to defeat the

enemy. They did a great job. They had three tanks destroy 43 vehicles.

I served for 20 months as a general's aide. The general had been a platoon leader in Korea, a company commander in Korea in 1950 in the height of the fighting. He had been a battalion commander in Vietnam and a brigade commander in Vietnam. And I asked him as a leader, he was an infantry officer, what did he spend the most of his time doing in the Korean conflict and Vietnamese conflict. And, he said "personal reconnaissance." Either checking the ground or checking the routes that the enemy could come into his units, or checking his units to see how they were doing. That is where he spent most of his time. That is what we all need to continue to do.

The importance of backbriefs and forward checks show up in historical examples also. First, it's doctrine that commanders should supervise. Not all commanders do. Lots get trapped into command posts. But, there is a story where Ulysses S. Grant was attacking Robert E. Lee's army toward the last year of the Civil War, and he was constantly trying to close with and destroy Lee's army. He spent a full day prior to this attack, riding all day on his horse, just checking the plan to conduct this attack. The next morning the attack was to occur, and after riding all day and most of the night, Grant went to camp, took the saddle off his horse, and went to sleep. So the attack commenced in the first part of the day. Grant was sleeping, and an aide rode up and said things aren't going very well on the left flank. And Grant said, "don't worry, they will," and turned back over and went to sleep. It's because he had personally checked the ground, and personally checked what was to be done, and talked to the leaders that he was confident that his work had been done, and now it was up to them to do the fighting. And he was right. They carried the day and destroyed the enemy. Examples like that have stuck with me about how important it is to personally check and conduct reconnaissance well forward to make sure that the plan is being carried out.

COLONEL TED KOSTICH, 1999

16. Leadership in a Composite BCT

This was a February rotation for the brigade combat team. Our task organization was a tank battalion, a mechanized infantry battalion, a light battalion that came out of Hawaii, an aviation brigade minus that had an attack helicopter battalion, a lift battalion, our direct support engineer battalion, forward support battalion, our DS field artillery battalion. We also had an MLRS battery that came to us out of Fort Sill, plus a brigade reconnaissance troop that we formed internally under the division Force XXI structure. When it was all said and done, it was about a 6300-soldier rotation.

I think I'll start on the battle command side during the train-up. A lot of challenges with the train-up in that we had a number of competing demands between train-up, redesign, and the Digital Advanced Warfighting Experiment. There were a number of opportunities to hone the staff efforts. The staff knew how I would fight but the two battalion commanders that we went through the Advanced Warfighting Experiment with were not the same two battalion commanders I took to the NTC. Those commands at the same time were focusing on their gunnery skills and their individual, platoon, and company level training to raise the proficiency level. We did have a number of opportunities to get together at company lanes, task force lanes, Janus exercise, and some other things, to include LTP. But the real collective energy did not come together as a total entity until we got to the National Training Center.

I would tell you when you take a composite of organizations that you don't have a habitual relationship with, the challenge of battle command is to get everyone to understand how you fight and what you are looking for. What your task, conditions, and standards are, and then communicating that you have the genuine welfare of them and their organization at heart, as you would your own. I'll give you an example. One of the battalions that was attached to us did not have a habitual training relationship with us. We went through an exercise where we did some rather dynamic re-taskings. As a result, the size of this battalion went from being a rather robust battalion to a rather small battalion. The perception of that commander initially was, or at

least it was my belief his perception was, that I was questioning his competence. That was not it at all. I was willing to accept risk at one part of the battlefield. Given the capabilities of his force, I gave that risk to his force. I also took substantial combat power away from him because I believed in my heart of hearts that I needed to mass it elsewhere. Once we had that discussion and we walked it through, we later found we could make whatever task organization changes we wanted across the entire brigade combat team without the issue of ever questioning someone's integrity or competence. That was a new dynamic for me because every time I deployed previously, we've had folks with habitual association. You've had a day-to-day relationship with them, and this was not the case there. It caused some growing pains. Once we got through that, it went very well.

Probably the greatest command challenge I faced was the large size of the task organization and the fact that there were many competing demands. Not all the demands were simply focused on mission accomplishment. Consensus building is probably a poor choice of words, but it called for a greater degree of cooperation versus directive intent or directive guidance. As a function of that, I think the task force as a whole matured much quicker. We were more cooperative in terms of uniting to get everyone towards a common cause. This was a success of the brigade combat team. Even though in some instances a certain unit or force would pay a disproportionate share of the bill in terms of either casualties or relinquishing resources in order to better the organization as a whole.

Now, having said all that, when we got there, the first day the main body deployed, the wind was over 40 MPH and it was raining. That is the type of environment those soldiers and leaders entered into the NTC. It rained the whole time we were there. Every fight we had it rained. So, to keep morale up, keep discipline up, and keep the fighting spirit up required a large degree of involvement by leadership at all levels. And, I will tell you that every place I went I saw leaders sharing the hardship of their soldiers. No one was asking their soldiers to do anything that they were unwilling to do themselves. I think that paid us rather big dividends.

17. Pressure to Decide

Defense. Our maneuver box went from the northern boundary in the National Training Center all the way to the southern boundary.

We had the whole width. And that gets back to the point I made earlier about economy of force and deciding where to accept risk. One of our operations was a defend mission and we had to defend from the northern boundary to the Turtle Fence. I opted to accept risk in the north. The plan called for a battalion minus (a light company and a tank company) up in the Northern Corridor, an armor heavy force in the Central Corridor, on both the North and South Wall, and then I positioned my reserve back, in Siberia, just south of the Central

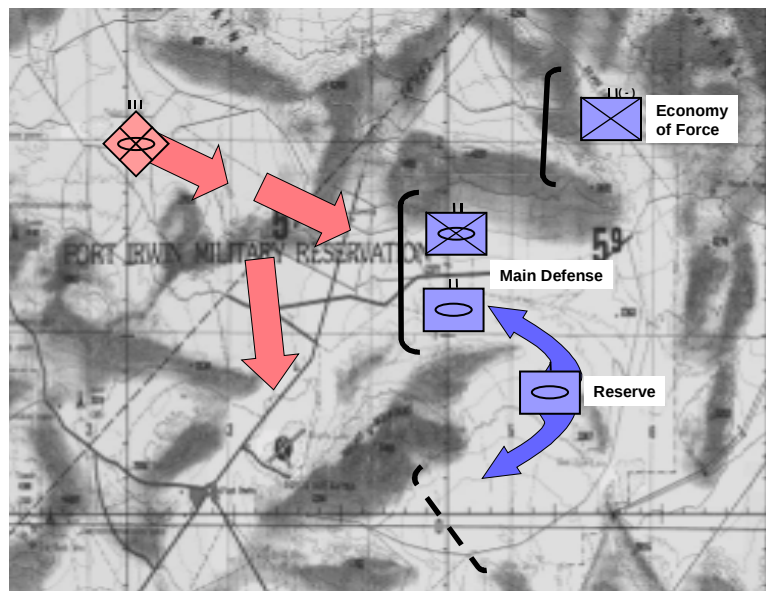


Figure 4. Brigade Combat Team Defensive Plan.

Corridor, off the main avenue of approach. I had positioned my reserve so I could go either way. I felt I had enough flexibility in my plan, given a reconnaissance. Since I had interior lines, I could reposition the force where required to blunt any penetration. The force in the north did its job absolutely magnificently. We were never penetrated in the north. Had some challenges in the center, but were never penetrated in the center. The decision criteria for the commitment of the reserve was where the enemy was going to go. If he went center, of course, there was a backstop. If he went south, then the reserves requirement was to assume a blocking position in order

to disrupt and delay the enemy force so I could reposition the main body towards the southern sector.

In terms of battle command, I missed the decision point because I didn't have a good read on the enemy. At the decision point that I had chosen, I didn't ensure that, through my R&S plan, I had sufficient eyes to allow me to make that decision. That decision had to happen when the enemy came out of the Brown/Debnam complex. Was he going to go center or was he going to go south? At that decision point I had the requisite eyes, but I couldn't talk to them. The mechanisms were in place, but I didn't have the comms.

To set the stage, the reserve company fell asleep. I had Sentinel radar coverage. We had synched force protection measures to make sure that the individual organization was protected from both air and ground infiltration, and as circumstance would have it, everybody went to sleep. It was a multiplicity of errors that contributed to the fact that the enemy was able to land Task Force Angel about 600 meters from that tank company and they never knew it. One thing led to another, and I was not aware of the situation. So when we had stand-to in the morning, we were ready to go for the fight. I positioned myself where I could see the battlefield both sides, north and south. I had my S3 on the North Wall. He was my directed telescope up north, so he could interface between the northern task

"The next thing I know, I look to my left rear and I see my brigade reserve just dissolve before my eyes."

force and the task force at the North Wall. The next thing I know, I look to my left rear and I see my brigade reserve just dissolve before my eyes. The enemy had closed in with dismounted infantry and infiltrated some AT-5s, and the

reserve was gone in a minute.

Now having said that, I don't think he really understood the success of what he had done. I immediately had to take forces from the north and reconstitute a brigade reserve. I accepted further risk up in the Alpha-Bravo Pass complex with the limited amount of light infantry and some AT systems. It was at that very point that the enemy had reached the decision to go south as opposed to center. I never did position the combat power I wanted between the center and the south. I had enough to delay and disrupt. It ended up that the

division allowed me to commit attack helicopters to the operation and that's what finally broke the attack in the south.

From a battle command perspective I had the time line, but what I did not do is get my TOC into the fight quick enough to help me with some of those decisions. By that I mean, the TOC has the ability to step back from all the fur flying. They can apply a very methodical and deliberate process, the decision support matrix, answering PIRs and other commander's critical information requirements, and then share those with the commander and tell him what they think is happening. I didn't get the most from that cell. Partly I would say it was my fault because I was too engrossed in the fight and I didn't pull what I needed from the TOC. At the same time, the TOC didn't push.

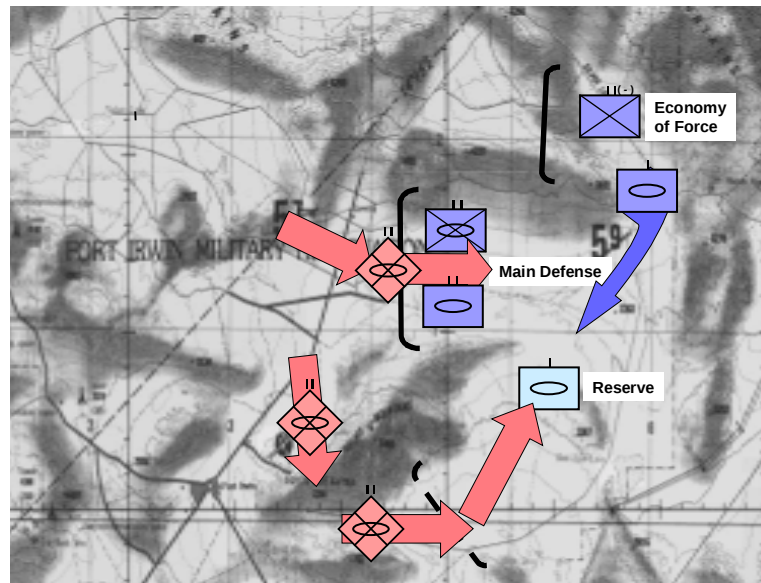


Figure 5. Reconstituting the Reserve.

The battle captain in the TOC said "Sir, I think here's the read right here and I think we missed the read. And I think oh, by the way, *now* he is going south."

We made that decision based on the intel available, but we were about 30 minutes too late. Had we made the move sooner, before the enemy got into terrain where he could maneuver, we would have had the ability, through a number of dynamic obstacles, air, Volcano, and other systems, to shut the effort down in the restrictive terrain and

then use artillery. But I missed the read. I didn't make the call in time. I recognized this later. At the time I refused to believe. I knew he had reconnaissance in the south, but I refused to believe he was going to come in the south because the terrain was more conducive for him to mass combat power in the center. If he came in the south, I did know he would have to fight uphill to get at me.

We had talked through this, walked through this, but by the time we saw he was actually in the south, the ground assets I had available to reposition were not sufficient to stop him. At the same time, he kept the pressure on in the center so you had to make the decision whether that was the main effort or not. If I thinned out the center too much, then what happens? I anguished a good 30 minutes before I made the decision to reposition one of the maneuver battalions from the center into Siberia where the Southern Corridor comes back up into the Central Corridor. By that time, the number of combat systems he had committed to the fight were simply such that if I didn't get attack aviation in it wasn't going to be long. All in all we moved well.

Part of battle command is being able to be decisive and make the right decision with the information available. We had all the information that I believe we needed to make the decision. We just didn't know it. When we did know it, it was too late. Later, we discussed why we made the decision? Why did we not know what we

"We had all the information that I believe we needed to make the decision. We just didn't know it."

knew later? Who else knew? Well, the BRT commander knew. Who did he tell? A whole host of things, and when you peel it all back there are

ways to work through that. We just weren't creative enough at that time to make it happen. That was the defensive fight.

18. Seize the Initiative

Offensive operation. This was our last force on force fight. Day 9, a night attack, where we went both center and north. We did a spoiling attack in the center with the main effort in the north. The enemy was defending forward of Granite Pass. They were defending on the east side of Granite Pass and Barstow Road. They were set at 800, 876, Peanut, up in that area. We had set conditions to fix the

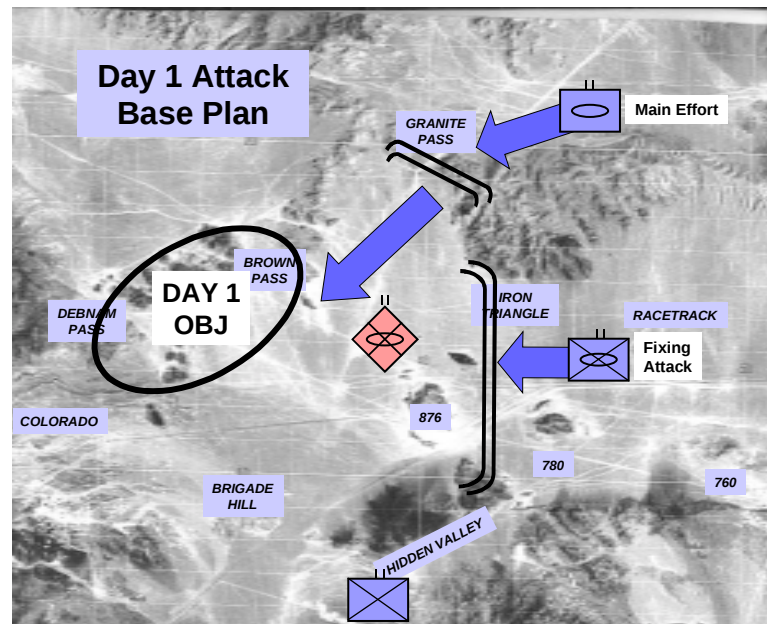


Figure 6. Day 1 Attack -- Base Plan.

enemy in the southern half of the Central Corridor while we maneuvered through the north with the tank heavy task force. We had an initial breakdown in critical friendly zones with the radar coverage. We had an initial breakdown in movement as we lost a percentage, more than I wanted to, to indirect fire in the north before we really got moving. So the first decision I had to make was with the battalion commander and his assessment of whether he could still carry out the mission he was given, given the combat power. The key to his success was not so much the direct fire systems, but retaining the mobility assets, the engineers, because we knew someplace we were going to have to breach and we believed that to be Granite Pass.

The battalion commander said he had sufficient assets left. We attacked at night. We had the scouts forward and we knew there was a significant wire and mine obstacle in Granite Pass. We lost the initiative a little bit and as a result received a non-persistent chem strike. At that time, the commander wanted to wait the 60 minutes for it to clear. I said negative, button up, MOPP4, and we took the breach

in full MOPP. The decision I struggled with there is do I wait and let the enemy mass additional combat power, most notably fires, and allow him to reposition? I knew in the south if we didn't keep the pressure on, he would just start moving units from the south to the north. In 50 minutes he could basically reposition the entire battalion he had set in the south. I made the decision we would continue the attack. We breached through the minefield and the next thing you know, probably 50% of the task force was still intact and we are now behind the enemy.

We had a multi-phased attack. The first day we were supposed to secure up to Brown/Debnam if we could, with the second day continuing the attack to the west to Crash Hill. When it was all said and done, we could have been to Crash Hill at the end of the first day, but I didn't have the combat power to do that. I could have gotten there and said yes, we are on the mountain, but I would have never held it. So, I made the decision that once we got through the pass, we would orient a company to the southeast to take the enemy in the rear and then send the remainder of the task force up to the Brown/Debnam Pass and secure that. We did that, but what we lacked

"I could have gotten there and said yes, we are on the mountain, but I would have never held it."

was the dismounted strength to hold it. So yes, we were kings of the hill for the day, but we lacked the combat power

to hold the ground. And I lacked the ability, at that point, to reposition the assets I had in the center and the southern part of the Central Corridor up to the north to reinforce them. Just didn't have any left. It was a very good fight.

Most difficult decision was, after the artillery strike do we still go? The breaching was a difficult decision. Do we wait for them to dissipate? Given the situation we were in, I decided we couldn't. The key to our success in the north was speed and surprise. What he did have up there, defending, was not dug in like it was in the center and the south. Once you afforded him the opportunity to do that, we knew we would lose that fight. So we took the breach and had the subsequent challenge with decon and some of those other things we had to go through afterwards.

I felt these were good decisions and would make them again in a flash. By the time you are under fire, both observed fire and templated fires, you have basically lost the initiative. And the only

way we were going to get that initiative back was to close with the enemy and take his fires out of the fight. He subsequently, once we got through, put FASCAM in. But because we took the initiative, he FASCAMED behind us. So, the breach was there. We created a breach. He had a plan to reseed but it was too late. We were through.

19. Conditions for Attack Dissolve in Bad Weather

The second portion of that battle had us moving from positions in contact. We were attacking a motorized rifle battalion plus and he had a CAR, combined arms reserve, of 10-15 tank killing systems. That was the follow-on day. So I had the armor battalion relieved by the mech infantry battalion, who took over security of Brown/Debnam Pass. I pulled the armor battalion back and reorganized those folks. And, we had a plan to use the light infantry in an air movement operation, not necessarily an air assault, even though it was cross-FLOT. The LZs were secure so it was more of an air movement from the north side of the Granite Mountains. The light battalion was to infiltrate along the valley that ran just north of Crash

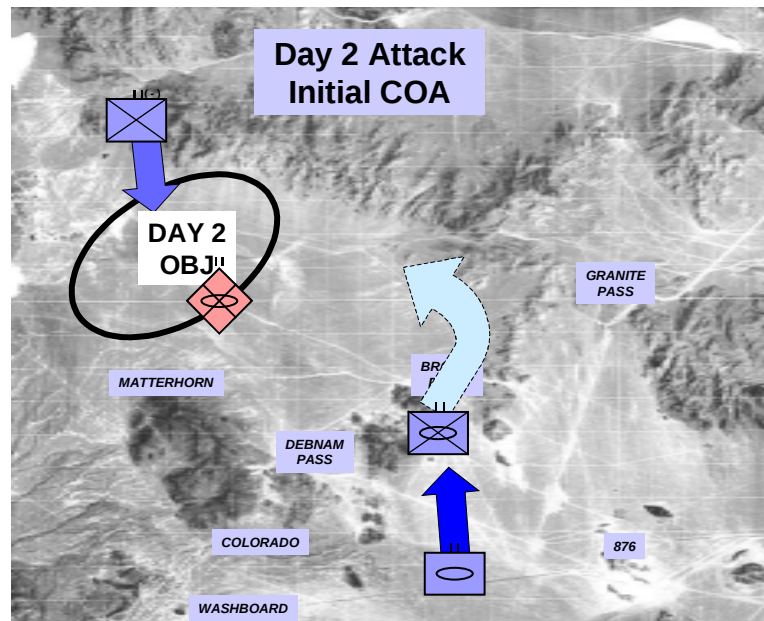


Figure 7. Day 2 Attack -- Initial COA.

Hill. They were going to come down the north side of the mountains and then come down on Crash Hill from the north. The mech battalion was going to continue to secure Brown/Debnam Pass and then move along the north wall of the bowl, clearing the wall and the ridges where the mountains joined the desert floor. They were going to clear that wall and then they were going to set up support by fire positions. We were going to pass the tank battalion around and then continue the attack on Crash Hill. We had fairly good reconnaissance out although we had some challenges communicating with the recon.

And then, all of a sudden, probably about 2100 that night, the weather just went to zero. Couldn't see, couldn't fly, couldn't do anything. We were in the process of conducting a FRAGO. We had adequate WARNOs out to everyone, but what I didn't know was when we passed the warning orders to subordinate maneuver battalions, some of those folks hadn't left "wake up" criteria. You always have to leave your command post with what I call "wake-up" criteria. They have to know when to go find the boss or wake the boss up. So, they had no idea we were changing the base plan until about 0300 even though we had been working this since about 2100 that night.

I had established a number of criteria for how we were going to work the base plan. We had a good read on where the enemy was and obscuration was the key element to our success with the ground maneuver through Brown/Debnam and the subsequent assault at Crash Hill. The problem was the wind was blowing so strong you couldn't get smoke, and if you could it was blowing the wrong way. We really needed the smoke to blow from north to south or south to north, but the wind was directly out of the west. Now our obscuration plan was gone.

Well, we couldn't fly the dismounts in because the weather was zero-zero for the helicopters. So now what were we going to do? Now we were going to truck them in. But then I had to redo the timeline and that required us to assemble trucks, cross-load all the infantry. We had previously had a plan where we would move the infantry to

an LZ with a timeline from that LZ to their assault position or support by fire position which would be X hours. But now it was Y

"So of all those conditions that I said I needed in order to be successful on this fight, not a one of them held up!"

hours because of the added time involved with trucking and movement.

Then we ran into the challenge of CASEVAC. Again, air traffic was grounded. I could get them in but had no way of getting them out. Then we ran into road conditions. A truck slipped off the road. No one hurt, but now the whole column is jammed up behind them with no place to go. Then another major element of combat power was fixed wing aviation. Even they couldn't fly because the clouds were so low. So of all those conditions that I said I needed in order to be successful on this fight, not a one of them held up! So at 0300 I made the decision we were going to frag, and we were going to go

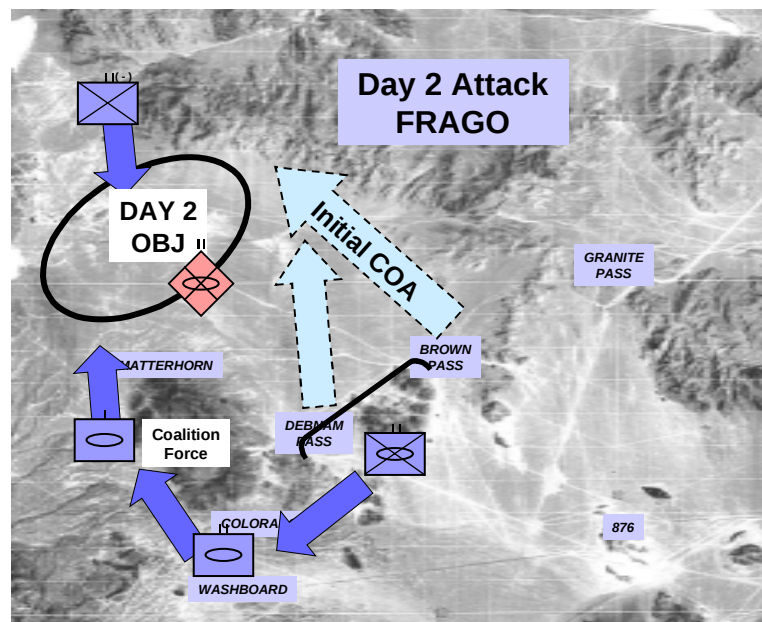


Figure 8. Day 2 Attack – FRAGO.

through the Washboard. We were going to keep hold of Brown/Debnam Pass but now take the maneuver tank battalion, that previously we were going to maneuver behind the infantry battalion, to the Washboard. We also moved the mech battalion down. They left a small force in contact, but basically the brigade reoriented from going center, now to going up to the Washboard and going to the south.

At the same time, we had picked up, the day prior, a company from host nation. So now we also had a force on our side that had T72s and BMPs. They were a coalition force that we were going to deploy with us. Initially, when I made the decision to frag off the base plan, we wanted them to lead us through the Washboard because they knew the terrain much better than we did. As host nation they had been there numerous times. With that as a general overview, I met with the battalion commanders at 0500 at Four Corners and we went through all this. Everybody acknowledged and understood the reason for change and why we were doing what we were doing. The weather is still very, very ugly.

But parallel planning was not occurring at the battalions and below. From the time the planning started until the time we made the actual decision, parallel planning was not occurring. Even though command posts were all acknowledging, "Roger, I got it, Roger, Roger." The commanders knew we were going to change as early as 0300. Only one had taken steps to make that change and get

"Everybody acknowledged and understood the reason for change and why we were doing what we were doing. ... But parallel planning was not occurring at the battalions and below."

company commanders refocused and reoriented prior to our LD at 0700. So now I've got one battalion trying to refocus, reorient, on the move and another battalion that had done some preparation and probably had a fairly good picture of what needed to be done. He had the graphics, et cetera. And then the third battalion is still on the base plan because I needed to focus some of the combat power from the enemy towards the north. The only way I could do that was the dismounted or light battalion. By pulling some enemy attention to the

north at Crash Hill and focusing him north, we could at least hold him in position while the rest of the brigade maneuvered.

So we LD at 0700. The coalition force is a company-size force and I am traveling with them in my 113. The intent was I was going to drop off behind the coalition force while they continued their movement to contact through the Washboard followed by the armor battalion, followed by the mech battalion. In the haste, and the fog and friction of war, the mech battalion jumps prematurely. So they start to maneuver through the Washboard. They are to my front and to the west when they should have been to my flank and to the east because I am with the coalition force. Remember, I wanted to lead with coalition followed by the mech battalion, followed by the armor battalion. Now what I have is the mech battalion, with me in the middle, and the armor battalion behind.

As the mech battalion enters into the Washboard, they come under direct fire from an enemy combat recon patrol. But, due to the weather, visibility, orientation, and a host of other things that come with the fog and friction of war, they looked to their left, which is now back to their east and southeast, and who do they see but me and the coalition company. Thinking those are the tanks that fired, they promptly take the coalition company under fire. Now I have a fratricide. We limited it, but by that time the coalition forces had already lost three systems. The coalition commander could not be convinced to remain with the brigade combat team so he starts to disengage and move east. Now remember, there was the mech battalion, the coalition battalion in the middle, and the armor battalion in the back. Now the armor battalion sees the coalition company moving east, and interprets the bad guys are counterattacking. When it was all said and done, we lost all but two vehicles from the coalition company to fratricide for a whole host of reasons.

We continued the attack through Washboard. When I did the battle calculus, knowing all I knew about enemy systems, our systems, our OR rates, we had no business attacking because I didn't have the requisite combat power when you counted all the systems. Hasty attack says I should have 3:1. And by the way, now the weather had cleared, but I had lost my CAS window. I had lost my aviation. But guess what? Now the enemy's helicopters were flying. His fixed wing is flying. And when it was all said and done, he really had an advantage in the battle calculus. I was attacking a force one and a half times superior to mine. We made good use of the terrain. It was slow

and deliberate. We managed to get folks behind Crash Hill, on the west side of the hill, but the enemy had already committed its combined arms reserve through his forces in contact against a second echelon of our division.

Battle command challenges occurred at the decision point. Having aids to assist you in making the decision is absolutely critical. Specifying go, no-go criteria. I believe we had those, but what I didn't do was share those decision criteria with my subordinate

"What I did not share with them ... was all those things that were going to cause me to change from the order."

commanders at the right time. When I published the orders, I should have said, here's the decision

criteria I am going to use to make the decision when we go and do this. We have a decision support matrix, but it doesn't always say all the things you are going to consider simultaneously. It is more sequential. At a certain point I'm going to make this decision. What it doesn't do is allow you to set the conditions ahead of time that says here's what is going to cause me to come off my base plan even before we undertake this operation. Once it started, I had all the decision points. That was all done. What I did not share with them ahead of time was all those things that were going to cause me to change from the order we already issued. That was one challenge.

The other challenge is clearly I should have been more direct in saying put your “six” on the radio. We talk to competent battle captains and TOCs but I made the flawed assumption that they would make sure that their commander was awoken or the commander knew. And questions were coming back which led me to believe that the commanders were involved in the process, but these questions were being generated by battalion S3s or other battle captains and being fed back up, not necessarily from or through the commander. So, here we are 3 to 4 hours out from execution and it's the first time the battalion commander is being made aware of a rather radical change from the base plan even though this had been working for at least 6 to 8 hours prior. They didn't have their wake-up criteria either or if they did, it did not include for example, “Tell me when a FRAGO comes in.”

20. Huddle on the Battlefield

Situational awareness in your command post is just as essential for battle command as is situational awareness on the battlefield. The first thing I look at whenever I come into a command post is the chart that has the current division FRAGO and the current brigade FRAGO. And, that's the last thing I look at when I go out. So, if something has come in I know to review it. Check FRAGOs when going in and out, it jogs your memory. So, when I left we were on Division FRAGO 12, now we're on 14, let me see the two that came in. And, before I leave, I always have the battle captain write down my wake-up criteria. I always have the battle captain or the ops sergeant walk with me to where I am sleeping. There was an incident during our rotation where they couldn't find a battalion commander. Not that he was goofing around. He just went outside and crawled in his vehicle and went to sleep. But when it's dark and raining, you wake up 100 guys in a 100 different vehicles... That's the level of detail you have to follow through. What I suspect is that not everybody had that. They all knew how I was going to fight. There is no doubt in my mind that folks knew that flexibility in a plan was essential. There was no doubt in my mind that they knew if we couldn't do X, we would do Y. They knew I had every confidence in them, but what they didn't know is that we *had* changed the plan and they were already well behind the power curve.

Also, superiors owe it to subordinates to look them right in the eye and ask if they have enough time to do this. When we did that that morning, everybody was nodding in the same direction either out of pride or a whole host of reasons. Clearly it was a complicated plan given the fact that we had changed it so late in the game. When commanders briefed me back, they clearly understood what I wanted. The understanding has to go at least two levels down. I don't believe I gave them, or they had, adequate time to get their subordinates to the same level of understanding.

One of the tools that worked well for me is whenever we had an operations order or a FRAGO we would huddle on the battlefield someplace. After we talked, I'd always have the commanders go to the side of a track with a piece of chalk or butcher board and draw what I just told them to do, and what they think this fight is going to look like. Because, if they can't draw it, that means they can't

"If you just have them brief it back to you, they will memorize it and parrot it back to you. But that does not guarantee they understand it. So I have them draw it."

visualize it. And, if they can't visualize it, how are they going to fight it within your intent? I use the same technique now. If you just have them brief it back to you, they will memorize it and parrot it back to you. But that does not guarantee they understand it. So I have them draw it. I started that as a battalion commander and I do the same thing here. It doesn't have to be pretty but it should give you that warm feeling in your gut that you know he knows what you want him to do. Now, he'll work the details at his level, but clearly don't ever let him walk off, especially from an orders brief, without understanding that.

The other TTP that served us well in battle command, and this is in the pre-execution phase, is having the order delivered and ready for the battalion commanders, and/or whoever comes to your brigade orders brief, prior to them actually receiving the brief. This way they can study it. And I'm a fan of cartoons. You can't get the level of resolution or lethality off these drawings that you can off of a map. But it is a picture that will stick with you. So, they get to visualize the battlefield and visualize where you want them in relationship to time and space, to the enemy and friendly forces. I give that to them

before they ever get the orders brief so they have the opportunity to sit down and look at it and figure out their role in this. So when they hear the orders brief they are figuring out where they fit in the grand scheme of things. Then before they leave, they show me what they think I told them to do.

Presence on the battlefield. I always traveled with my FSCOORD, always in an armored vehicle, and I always sent my S3 to the opposite side of the battlefield. In some cases where there are three ends, we accepted risk and I sent no one other than an LNO. Also, I always had someone who could speak my language in a dissimilar forces headquarters. For example, I always had a tanker in a light battalion headquarters. Not because the light battalion were not good fighters, but when I gave them a company of tanks, the assigned tanker could articulate to that battalion commander the amount of fuel, ammo, and other issues a tanker would automatically consider.

I also had them provide me with similar LNOs. LNOs are absolutely essential. We have gone away from that. We overlook that and instead send your least experienced guy because you don't want to give up a good guy to be an LNO. You ought to send the best guy you have to be your LNO, because he is speaking for your organization in your absence. He is watching out for your best interests.

Somewhat related, though not necessarily battle command, is attachment and cross-attachment organizations. Policy was, always send your very best. So if I were to send you a tank company, I would send you the best tank company in my battalion. I, in exchange, would get your best infantry company or mech company back. You always kept your weakest. The reason you always sent your best was he is best capable of executing the mission and representing your battalion in your absence. Not everybody will adopt that mindset, but I always send the very best in a cross-attach.

Every single day I would go look commanders in the eye. And you could just tell what they are going through. You can tell whether you are wasting your time talking to them or if, in fact, their batteries are charged enough to understand what you are saying. Be very conscious when you wake your commanders up, and what you are putting your staff through in preparation for the battle. What you don't want to have happen is they get to the fight and say let's get this over with. They are so mentally and emotionally drained from everything

"What you don't want to have happen is they get to the fight and say let's get this over with."

they've done prior that they are not ready to fight. It's that delicate balance that you have to see face to face and you can't do that by talking to someone on the radio. You have to go look them in the eyes. That's probably a brilliant flash of the obvious, but you would be surprised the number of junior leaders that folks did not get down and see every day and look them in the eye, even though they have a critical role in the fight. Some days you have to make a decision based on what your guys look like physically and mentally. Sometimes you have to make a call of risk avoidance or risk minimization. If you don't look at them, you're wrong.

I take some digital products, but once you get in a close fight, they are of limited utility. They are great for the battle captain and the TOC. They are great for those folks keeping you in the fight. And sometimes the tendency is to get so involved in the close fight because that is where our comfort level is, that is where we all grew up. I didn't realize that right away. You have to take a step back and remember that that young lieutenant colonel or captain knows how to fight that close fight. What I've got to do is set the conditions for him to be successful in that fight, not help him once he's in it. Once he's in it, that's his fight. That's really a leap that many folks have to make. It was difficult for me initially because most of us are hands-on type of people. You're hands-on as a company troop commander, you're hands-on as a battalion commander. But as brigade commander I've got to step back and ask how I can structure him for success in his fight.

21. Two MICLICs Delay Breach

In live fire we had a problem in deconflicting aircraft and artillery. Even though I believe we were experienced in it, there was a great reluctance from the Air Force using max ord to simultaneously attack targets while artillery was going through. That made SEAD very, very difficult, because you had to shut the artillery off to bring the air in, and the air would leave and you would start the artillery back up. We could never convince them that we weren't going to hit them because we knew where the gun's target line was and knew our max elevation. We could just never make that work. And we tried it hard. We gave them PAAs where we repositioned artillery. We knew which artillery were hot and which were cold. We tracked artillery positioning to a science in our live fire but could never

convince the folks that were flying that we had the requisite level of precision in our control.

So we go to the breach. We have obscuration. The wind is blowing the right way. All the conditions are set. We bring up the MICLIC and we are doing very well. We're going to put two lanes in and just blow through this thing. MICLIC number one goes in, bring up MICLIC number two. Within a matter of 30 minutes from the line of departure, we are at the breach site already. Good combat power. Moving well. MICLIC one fires, lane opens. MICLIC two misfires. It's on the ground, but it hasn't gone off. Because of the spacing between the lanes, we couldn't put anybody through the first lane due to safety reasons because the second one had not exploded.

So, now we are looking at our watches. I know how much smoke we have, and I knew that if I did not have smoke for the second objective, that I

"MICLIC one fires, lane opens. MICLIC two misfires. It's on the ground, but it hasn't gone off."

would get through the first one and no more. I had positioned myself where I could see the breach. Based on what I could see, I made the decision to accept risk, lift and shift from smoke targets to HE targets and prep on the subsequent objective. Set the conditions for obscuring the subsequent objective once we got through the breach because that was about another 30 minutes. Given time-distance, I anticipated it would take that long for the smoke to build up. We never detonated the second MICLIC prior to the obscuration dissipating. Now the second MICLIC goes, I've got all these nice lanes through the minefield, but guess what? No obscuration. I'm deep. I'm working on the next guy. The smoke platoon did not get through the far side of the breach to continue the obscuration.

Again, where do I accept risk? I knew I'd never get the final objective if I did not lift and shift because I knew the amount of smoke I had remaining. My FSCOORD was right there. We timed it and decided if we don't stop it now, we will not have adequate resources to get beyond there. In either case we would have culminated at the breach. So I made the decision to accept risk based on some input I had from the task force engineers and the FSCOORD, but the timing was off. We got through the breach, but we didn't have the combat power we needed to continue the attack to the north.

We detonated the MICLIC by hand. We had to wait 15 minutes, and then put a block of C4 on the end and blow it up. With all the various safety constraints, we were not allowed to use the other lane. The valuable lesson from that is I need to know going in what the spacing is so if X blows and Y doesn't, I still have a lane I can use. I didn't ask that question going in. Those are the kind of things you pick up and put in your kit bag. In the future... one MICLIC. We will get the forces on the far side and then I will worry about a second lane. I synchronized the combat power and resources available at brigade to structure for success. We had artillery, mortars, air. We did all that right to a point. Until I made the decision to go with two MICLICs, so we could get through twice as fast, when I should have just said one MICLIC. What I allowed to happen, and I missed the read on this, is I allowed the brigade combat team to close on a breach anticipating, as timed, the lanes are going to both be open and as soon as they go, we're through. When the second one didn't blow, now I have the whole brigade jammed up.

COLONEL RICK LYNCH, 1999

22. Pick Up the Red Pen First

The hardest mission was our first mission at the National Training Center, force on force. It was billed as a movement to contact mission. I had 88 tanks and 44 Bradleys, 3 maneuver battalions, and I was going against an OPFOR that I believe had a similar amount of systems and a similar mission... that we were both doing movement to contact. What happened was, rather than take the time to stop and think to fight the enemy, and really analyze his capabilities and vulnerabilities, I simply took at face value what the division order said. You get a division order out there, the 52nd Division. And there's always an intel annex, and in the intel annex is always the most likely enemy course of action. And, all I did, very naively, was assume the 52nd Division does have eyes so they're telling me what the enemy is going to do. As a result, I based my plans on what I thought the enemy was going to do as a function of what the division told me they were going to do, which was all wrong. All wrong.

You have to focus on the enemy. You have to think like the enemy, and that's really the most critical piece of battle planning. But we pooh-pooh that all the time. Instead, we say the enemy is going to this, the enemy is going to attack in this CRP, FSE, advance guard formation. Then in the CRP you can expect to see three vehicles, and the regimental recon comes forward and it's going to have some BMPs and BRDMs. But that's all wrong because he never does that. The OPFOR at the National Training Center is not constrained by the smart books we write here at home station. He does whatever he wants to do. So, what you have to do in battle command is you have to ask what are the enemy's capabilities, vulnerabilities, and what's his mission? In my first mission at the National Training Center I didn't do that. I took at face value what the division told me. So, I thought I was doing a movement to contact against an enemy also doing a movement to contact. He was coming through Red Lake Pass, he was oriented on Irwin Military City, and he was working his way through Whale Gap in the Southern Corridor. I convinced myself that as long as I blocked the Valley of Death in the Southern Corridor and continued to move, then we would have

the meeting engagement, and conditions were favorable to me, and I'd win because we had all these great plans.

The problem was the enemy didn't do that and he never intended to do that. He had about a third of the combat power that I had. I didn't know that. I didn't ask that simple question, "How many tanks and BMPs does the enemy have?" Since he only had a third of the combat power that I had, he was never going to do a movement to contact or meeting engagement because he would have lost. So, what's he going to do? Well, if you think about what he is going to do given unfavorable conditions like that, he's going to move to defend. He's going to find a key piece of terrain, and he is going to set up a defensive position there, and then I'm going to attack into a defending enemy. But I never thought about any of that stuff. What I thought was we were going to meet in the middle, and I was going to win because I had more than he did and we had trained for this.

What happened was the enemy continued to progress only to the Siberian Ridge complex. Then he did a reverse slope defense on the Siberian Ridge complex, which is almost impossible to attack against because you are attacking uphill through constricted terrain. And although I thought the CRPs would be about 3 BMPs, very small things, he augmented the CRPs with T80s, AT weapon systems, and NBC reconnaissance platforms, and all those things. So the CRP that I thought was going to be about 3 platforms ended up being about 10 platforms. And he kicked those out real early and he controlled a key piece of terrain. So, a 2A45, for example, which is an AT weapon system, set up just behind the Whale Gap, took out an entire task force as he went through, and we never did figure out where he was until the AAR. And then I'm thinking, because I'm visualizing what is going on in the battlefield, we lost the task force there, but I'm not sure why we did. I'm still convinced the enemy is coming and we are going to have this meeting engagement. I told everybody that there were two pieces of key terrain I wanted to control, Hill 466 and the John Wayne Foothills. We got to those pieces of key terrain and when I got there I said now we win because that is the key terrain. Problem is he didn't ever want that key terrain. He stayed on the east side of the Siberian Ridge Complex and waited for us to attack. And we did. We piecemealed ourselves in this defensive set, and he wiped out the entire brigade combat team.

So, the moral of this story is don't believe anything you hear from anybody because nobody knows. Unless you have the opportunity to

call the enemy personally and ask them what they are going to do, nobody knows. Everybody is just thinking what they know. We use the term "most likely enemy course of action" but we have no idea what that means. All we're doing is thinking. So, what the commander has to do is say, "Okay, I got all that input. Very interesting. But first tell me what is the enemy's capabilities. How many tanks, BMPs, BRDMs, et cetera? What chemical capabilities does he have? Persistent, non-persistent? What kind of FASCAM capabilities does he have?" Ok, I have his capabilities. Number two, what is his mission? What is he trying to do? In this particular vignette, what I was told by the 52d Division was that his mission was to secure Irwin Military City. As a result of that, I was convinced that regardless of how many losses he took, he was going to continue to attack to the east and take the Irwin Military City. That was never his mission. His mission was to destroy as much of us as he could. He wasn't caring about what he was taking. Third, and probably the most important question to ask is, what are his vulnerabilities? If you do that first, "you pick up the red pen first," in the words of General LaPorte, then you think you know what the enemy is going to do. As a result of that, here is what I am going to do so I can accomplish my mission having thought about the enemy, having truly focused on the enemy.

At home station training we did exactly the wrong thing. First off, in every training event leading up to the National Training Center I controlled both the BLUEFOR and REDFOR. It's easy to win when you control the bad guys. That was a mistake. Then we published this

"...in every training event leading up to the National Training Center I controlled both the BLUEFOR and REDFOR. It's easy to win when you control the bad guys."

NTC smart book that says when the enemy has this mission he is going to do this, et cetera. It is all very doctrinally constrained. But the OPFOR at the National Training Center, any OPFOR, is not going to feel constrained by some book that somebody wrote back at Fort Knox, Fort Leavenworth, Fort Benning, wherever that may be. So, thinking like the enemy. That's the critical piece.

23. Everything Takes Longer Than You Think

National Training Center again. The defense in sector mission. I'm given the entire width and depth of the National Training Center as my maneuver space. It is all part of Force XXI TTP. Normally you're constrained to the Central Corridor, Southern Corridor, whatever, but they didn't want to do that. Given the digital capability that I had and the idea that you could have expanded situational awareness based on this digital capability, I should be able to move my forces to get them at the right place at the right time, to mass the effects of combat power, and kill the enemy even though I have a battle space that is twice as big as anybody else's. The concept of Force XXI operations is you take a task force that normally had 3 to 5 kilometers as its battle space and now you give him 15 kilometers. You take a brigade combat team which normally had 15 kilometers as a battle space and you give him 45 kilometers in terms of width of sector. The reason you can do that is because based on information technology, now you have a better view of where you are, where the enemy is, where the friendly forces are. That is the concept, so you have more battle space. I liked it. The problem with the digital capability is not *if* the technology goes out but *when* the technology goes out. And sometimes, even though you think you are going to have the technology, you don't have it at all.

For example, I was supposed to have as a brigade combat team access to JSTARS, so I would have moving target indicators. In the Warfighter and all the simulations prior to NTC, I had JSTARS, and the JSTARS indicators is what caused me to cue my UAV and send my UAV over there. From the UAV I could watch the enemy and make decisions about what I'm going to do about them. I thought I was going to have that same capability at National Training Center, but I didn't have it. When I got to NTC, JSTARS was vectored to a real world mission. But that was okay. Now I had lost that piece of technology, but you still have assets... a UAV and ground reconnaissance capability.

So, I had the entire National Training Center. I was sitting at the east side of the reservation with my back up to the east gate. I was conducting a defense in sector mission with an enemy coming from the west to the east. I had this entire battle space I had to defend. What I could have done was taken a doctrinal approach to the problem and said I'm going to put a task force in the south, a task force in the center, and a

task force in the north and have a very linear defense and hope he doesn't penetrate. Because if he penetrates me, then I have the normal OPFOR drive by. He's penetrated and he continues to move to the east gate. Waves to you as he goes by. This is what the existing doctrine would have told me to do.

Well, you can't do that given the fact that you have three maneuver battalions each with only three companies, a light infantry battalion, and 45 kilometers worth of battle space. I mean, you can do that but if you do that you're stretched very, very thin. So, this is the other piece I was talking about. You have to think outside the box. We talked about the enemy's vulnerabilities and capabilities. Then, what are my capabilities and vulnerabilities, and what is my mission. What I decided to do is a defense in depth focused purely in the Central Corridor and accept risk in both the south and the north. I put a task force forward, Task Force 1-66. Behind them I put both Task Force 1-22 and Task Force 3-66 as mobile reserves. So, when the enemy came in, if he decided not to go center but to go south or north, I could flex those two mobile reserves. I could then cause him to never penetrate me, assuming I could position my force at the right place at the right time, but rather have to fight multiple fights in sequence. I knew he wasn't going to come across the entire width of the battle space. He was trying to penetrate and then take the east gate.

With no JSTARS I wasn't able to see the width of my sector and make the decision. The problem people have to remember is, even on the Force XXI battlefield, you still have to move from point A to point B. Moving from point A to point B takes a lot of time. Everything is timing. I told the guys, as we prepared for the National Training Center, all these lessons I've learned the hard way. One is, everything is timing. And two is, everything takes longer than you think it is going to take. So, if you think about those two things, if I've got Task Force 1-22 as a mobile reserve, I've got to have some trigger line when I've got to launch him from point A to point B so he can get there and get set in time.

"...they're lessons I carry today... One is, everything is timing. And two is, everything takes longer than you think it is going to take."

Given no JSTARS and given one UAV, how do I see deep? Well, the answer is ground reconnaissance. One of the greatest things that

we did in this division redesign is create these brigade reconnaissance troops, two scout platoons and a striker platoon, then have those guys report directly to the brigade commander. So, I used the reconnaissance troop as my deep eyes, and then used the task force scouts as our closer-in eyes. One of the things that people are getting confused with now is that you have all these scouts, what do you do? What you don't want to do is use your brigade reconnaissance troop to do nothing but augment the capability of the task force scouts. You don't want all these eyes looking at the same thing, essentially.

The basic paradigm in the Force XXI operations is see them deep, kill them deep, and only get in direct firefights with their supply trucks. That's what you want to do. So, you put the recon troop out deep, and that is what I did in this defense in sector mission. I was able to put them out deep enough, having published a reconnaissance order separate and distinct from the tactical order. Important point. See, what we do a lot of times is we say I am going through this mission analysis process and it's going to take me X amount of hours to do it at the brigade level and now I'll publish this order. If you publish the order that tells your recon assets to do something at the same time you tell the tactical/maneuver units to do something, what you've probably done is waste about 24 hours because the recon troop could have already been out there. So, we published two separate orders. One as a recon order, and one as the maneuver or actual tactical order. I never brought the recon troop commander back for that second order. He just stayed out there and input to me.

It's all terrain management. Even in the desert, the expanses of the Mojave Desert, there are only certain places the enemy can go. So, if you can get eyes on those certain places, focus on those NAIs with ground assets and electronic assets if you can, then when he gets to that NAI, then he has to make a decision. See, that's the other thing about thinking like the enemy. He's got to make decisions like you have to make decisions. So, if you can watch him make his decision, then you are better prepared to move your forces at the right place at the right time to be able to take advantage of the situation. The recon troop was absolutely critical.

So, the enemy came in on this defense in sector mission, saw Task Force 1-66 in the middle and thought that was where the defensive area was going to be. But that was only the first of three. He had three repetitive fights that he had to fight so by the time he had gotten

to the east gate, he had nothing left. Unfortunately, we had nothing left either.

24. Tactical Patience and Managing Battle Tempo

The third vignette happened in the Division AWE. Remember, the division was very successful in Division AWE. Four combined arms armies killed by the 4ID. That's the way the story plays out. And it worked. In simulation, which makes it a lot easier, but it worked. Force XXI battlefield enhancements in lethality and enhancements in survivability based on situational awareness and I say, "Amen." That's a true statement. If you know where you are, and where the enemy is, and where all your friendly forces are, then there is much, much less probability that you are going to have a fratricide because you know who is where. And there is much greater capability to get you to the right place at the right time so you can kill him. So you are now much more lethal. And, by the way, you have all these fancy systems. You have Crusader, you have Comanche, all these futuristic systems.

We were able to kill four combined arms armies with one division. The problem is the third leg of that stool which is the OPTEMPO leg. Remember, we say improvements in lethality, survivability, and the ability to manage the tempo of the battlefield. That doesn't mean things happen quickly. All it means now is that we're managing the pace of the battle so that we contact the enemy at situations to our advantage. That's the critical piece. I wasn't paying attention to that during the first fight. It was either the Division AWE itself, or it might have been one of the ramp-ups. We were going to the Neckar River. The Neckar River is a real pain in the butt river that we had to get across so we could accomplish our objective. What I thought I'd do is race to the Neckar River and get there as quickly as I possibly could. But, even when things started going wrong, I continued to push to the Neckar River and we just got our butts kicked at the Neckar River.

I got to thinking why that happened. That happened because I got in a hurry. You don't have to be in a hurry given today's technology and tomorrow's technology. Rather, you can manage the tempo of the battlefield because you know where you are and you know at what rate you are moving and what's going on in your area of the world. And, you know what the enemy is doing and at what rate he is

moving, and what's going on in his area of the world. Then you can make decisions to do what you have to do, to get where you want to

"People are ... fixated on this idea that things happen quicker on tomorrow's battlefield given all this digital capability and that is exactly wrong. ... it is going to happen at the pace that you want it to happen because you are now in charge of the tempo. "

be, by managing the tempo of the battlefield. People are starting to get fixated on this idea that things happen quicker on tomorrow's battlefield given all this digital capability and that is exactly *wrong*. What is exactly right is, it is going to happen at the pace that you want it to happen because you are now in charge of the tempo. You don't have to do everything quickly.

25. No News is Bad News

Our third mission at the National Training Center was a deliberate attack mission. When you are out of communication, you're camping out. Remember, it's command and control. If you are in command, and are in control, that means you can talk to all your forces. If you go to the National Training Center and you don't set yourself up for success in communication, then you're just camping out. In the third mission we had that problem. I had to attack across the width of the National Training Center and the enemy was set on the western side of Brown/Debnam Pass. We thought we knew how he was set up, but it proved that we were wrong. Again, it goes back to thinking like the enemy. Is he going to set up reverse slope Brown/Debnam? Is he going to come forward? Is he going to come to the east of Brown/Debnam Pass? Is he going to set deeper back by Chinaman's Hat? Thinking like the enemy is still the critical piece. I had to do a deliberate attack given the situation. What I chose to do is a double envelopment.

"If you go to the National Training Center and you don't set yourself up for success in communication, then you're just camping out."

You can take some risk on the Force XXI battlefield. And one of the great things we have in the 4ID is the ability to

take risk and not lose your job. The CG wants you to try some things that may be different than most people do, and that's what we're supposed to do; push the margins to see what we can do given the capabilities that we have. So, I said, OK, here is my great idea... I'm going to do a double envelopment. I'm going to come down the middle with Task Force 1-66 and work my way through the Brown/Debnam Passes. But at the same time I'm going take Task Force 3-66 and run them through the Southern Corridor and have them attack up through the Colorado Wadi. And I'm going to take Task Force 1-22 and bring them down the Northern Corridor and have them attack over the Bruno Escarpment area. Then, before you know it, the enemy is going to be hit in three directions simultaneously. And he is going to lose. That was my plan. It was a great plan, just didn't work worth a darn.

The reason it didn't work worth a darn was the communications piece. If you want to be truly a commander on tomorrow's battlefield, before you allow your staff to do any kind of course of action analysis or recommendations of course of action, they have to prove to you that, no kidding, you're going to be able to communicate over the battle space that you're operating in. That means knowing what retrans stations are going out? What relay stations are going out? What am I using UAV for? Is it going to be a retrans vehicle? Am I going to take a UH60 out of my inventory and make him a retrans? Then, is there redundancy? For example, you say you want to retrans the brigade command net. If that retrans station goes out, what is backing that up, because if you can't communicate, then you are just camping out.

What I found in this double envelopment plan that I had, because I was using all 45 kilometers of width, is the only way I could communicate with every element in the fight was if I flew in the UH60 over on top of each task force. Then I could talk to that task force commander. Then I was having a great conversation. The problem was me and *that* task force commander were communicating and no one else was hearing us communicate. See, that's the problem. You have to be able to eavesdrop on all command nets. Some guys say you can get out of voice command and get into digital command and that is all wrong. All wrong. First off, remember only 70% of communications are at the hands of the listener. Always know that. So, you, the brigade commander, are communicating with, say, Task Force 1-66 commander, and you guys are having this great communication. Now you have situational awareness of what his

fight is in his sector. That is only about one-third useful. What's then very useful is that your TOC heard that same conversation. So your XO sitting back in the TOC knows what is going on in Task Force 1-66's sector *and* the commander of Task Force 1-22 *and* the commander of Task Force 3-66 *and* the commander of Task Force 1-14, 45 kilometers away, heard that same conversation. That way we're all given the same relevant common picture. You have to know what is going on across the battle space.

So, I'm flying around and it is a long fight. It takes us about 6-7 hours to work our way through it. I'm flying around talking to each of the task force commanders but no one else is hearing that. And as the result of that, Task Force 1-22 in the north, which is supposed to be pacing itself against Task Force 3-66 in the south so to hit him at the same time, could not do that because he did not know how fast Task Force 3-66 was moving. Task Force 3-66, on the other hand, did not know how fast Task Force 1-66 was moving. So what happened is we got piecemealed. We ended up attacking first with Task Force 3-66. Now, the enemy, he has a lot of options. The enemy has X amount of attack aviation, that Sokol capability that he's got. So, what he did is he could take all those assets and pile on Task Force 3-66 because he only had one fight going on. Remember, my plan was for him to have three fights going on at the same time. But he had one fight. He killed Task Force 3-66. And nobody knew Task Force 3-66 was killed because they were out of communication. Then he turned on Task Force 1-22 who was working their way through the Bruno Escarpment and he is getting killed. Then all that was left was the last task force, 1-66, and he killed them. That is the problem with the communications. See, everything is timing and everything takes longer than you think it is going to take. You need commo to compensate for that.

The commander, right now, brings to the battlefield two critical issues. One more important than the other. One is, clearly articulated commander's intent. What I told all the task force commanders is I wanted to hit the enemy all at the same time. The plan was not to fight 1-66, then 3-66, but rather everyone at the same time. They all understood that. The problem with that is they didn't know what everyone else was doing. No news wasn't good news. No news was, we don't know what's going on in that sector. So, they continued to progress and Task Force 3-66, in the absence of any kind of information from anybody else, thought everybody else was doing

what they were supposed to be doing as well and continued to progress even though 1-22 had been slowed up. So, clearly articulate commander's intent. What does "right" look like when it's all over? What is the task and purpose and end state, so when we are all done, here is what "right" looks like?

That's important, but not as important as the second piece, information requirements. In the digital battlefield people say it will be real easy to be overwhelmed with information. Quite frankly, it could be if you didn't refine what information you needed via informational requirements, PIRs, priority information requirements, what I need to know about the enemy, and CCIRs, critical information requirements for your own forces. What do I need to know about the friendlies? What are my high value assets? What are my high payoff targets? Where are they positioned on the battlefield? So, if the commander articulates all that, when somebody sees it, then they can feed that information back and say here is the answer to that question. But if you can't communicate, you can't do that. So, in numerous occasions on that fight somebody saw something I needed to know, but they couldn't tell me because I was out of communication even though I was flying around in this UH60.

You talk about the ground reconnaissance. It's only useful if you put them out and can still communicate with them. We tried using TACSAT to give us long range communication and that didn't work as well as we wanted it to. There has to be some backup capability. When you put all your eggs in one basket, you have to make sure you watch that basket and make sure it works. You have to be able to communicate. You have to plan on redundancy.

26. Survivability on the Move

When I talked about the four things in terms of command that I told my units as we were preparing for the National Training Center, I said everything is timing and everything takes longer than you think it is going to take. The third one is if you stay in one place more than 8 minutes you die, and the fourth one is when they kill you, they are going to kill you from the flanks and rear. All those things proved to be true in 1995 when I went out there as a task force commander as well as in 1999 when I went out as a brigade commander. There was on numerous missions, for example when I talked about the movement to contact mission, first mission, a single 2A45 weapons system properly

positioned can kill an entire task force. He's not going to kill you head on. He's going wait till you go by and kill you from your flanks and your rear. What you have to do in all your home station training is, you have to insure that everyone realizes that the enemy is not always to your front like he is on all our gunnery ranges. Rather, he is always to your flanks and your rear and he is going to kill you from those positions. That was a critical piece that we trained hard here at home station and we still screwed up at the National Training Center.

Then the other. If you stay in one place for more than eight minutes, you die. Everything you do at the National Training Center and everything you do, I'm sure, in combat is observed. If you believe that you won the counter-reconnaissance fight, you're kidding

"...if you stay in one place more than 8 minutes you die, and ... when they kill you, they are going to kill you from the flanks and rear."

yourself. Because what the enemy does at the National Training Center, and I'm sure in combat, is he puts out a whole bunch of ground eyes to watch your movements. If those ground eyes get taken out,

he's got a plan to refurbish those ground eyes. So you never really win the counter-recon fight. One of the things we kid ourselves with is we put up this chart in all of our TOCs with pictures of BMPs and BRDMs and little stick figures, DRT teams, and then we get a report in saying we killed a BMP, so we check it off. And if it ever got to the point where we checked off all the BMPs, then we won counter-reconnaissance. That's all wrong, because all he does is he refurbishes them. First off, we never really knew how many he put out in the first place because again, he doesn't read those smart books we put out at home station. So, you have to know you lost the counter-reconnaissance fight, which means if you stay in one place more than 8 minutes, you die because he is watching you. He's watching your assembly areas. He's watching your LOGPAC areas. He's watching your FARP. He's watching your LD. And then, at his choosing, he is going to kill you if you stay in one place more than 8 minutes. The reason you use 8 minutes is that is how long it takes him to process a fire mission. From the time he first calls a fire mission to the time he sees rounds on target is 8 minutes. So you just have to remember that.

COLONEL CRAIG MADDEN, 1999

27. Air-Ground Planning

My headquarters is aviation oriented. We have 2-4 General Support Aviation Battalion, which has 24 Blackhawks. We've got 1-4 Attack, which is 24 Apache attack helicopters, so you've got the flavor of the attack helicopter business. We've got 1-10 CAV Squadron, with Bradleys and two troops of Kiowa Warriors. So the brigade is a mix and it's considered the eyes and ears of the division. So, a lot of the guys in the brigade are familiar with armor because of the CAV squadron. But the brigade staff doesn't deal that much at the task force level with what an armor battalion or even a CAV squadron does until you get into an NTC environment. 1-67 Armor was attached for this rotation. When we deployed to NTC as the brigade headquarters, we went through many different types of mission that these aviators in the brigade staff have never even seen before. Very hard on the S3 shop in terms of OPTEMPO.

When a maneuver brigade goes to NTC and an aviation element goes with them, that aviation element brings some planners to help plan the missions. When we went to NTC as an aviation brigade headquarters, we planned all our aviation missions but were also planning the ground maneuver part. Yet we didn't have a chunk that came from one of the maneuver brigades to help us plan the ground maneuver missions. Our aviators in the S3, along with each of the battalion commanders that owned those guys, still had to plan the mission. So, where you normally have an element that comes along, like aviators, that helps you plan, we didn't have that additional chunk. We are not going to significantly change that. I think it is just a training requirement and we may have to add more LNOs or more armor guys in the brigade staff.

I'm thinking one of the missions that was probably the most challenging was an attack. We flailed terribly, I thought. We try to do one-third/two-third rule where at the brigade headquarters level we spend one-third of the planning time and we give the units below us two-thirds of the time before the mission. Probably the most challenging and difficult mission was an attack where we had the possibility of having to do two breaching operations. *Nobody* in our

brigade headquarters had ever done breaching operations. Even as an armor guy, I had never been through a breaching operation. I got with the two commanders who would have to breach, 1-10 CAV and 1-67 Armor.

It snowballed at the brigade headquarters. Usually at NTC when you get a mission, you are already getting ready to start fighting another mission. You are really planning a mission and fighting a mission simultaneously. We spent way too much time at the brigade level trying to figure this one out. We didn't even have the experience level to wargame a breach, so we pulled in our engineer commander and he kind of got us spun up. Even he had to spin up somewhat in terms of how we were going to do this breaching operation at the task force level, a pretty big operation. It took some time. Then we talked it through at our brigade staff level. And then we had to include it in our wargaming. We spent a lot of time getting ready and learning for this mission.

And, the OCs drove us a bit. I let myself get overcoached and I'll never do that again. You have to make an assessment and go with your gut feeling. Because I hadn't been to NTC since 1983, I initially let the OC relationship influence my planning. I heard, "you guys really need to plan for two breaches." Well, two breaches are a big operation. Two task forces trying to get through obstacles. One of them has to punch through and eventually you get to the far side and you go on the attack. So we spent way too much time planning at the brigade staff level. By the time we got the brigade order down to the engineers and the squadron and the battalion that had to breach, we were already behind the power curve. They were doing their final rehearsal up into that night. We had to execute the operation early the next morning.

At the brigade level, I learned if you don't have a competent staff on a particular mission and you're not well read on it, you probably won't have enough time to plan it at the brigade. At least give the

"...give the missions down to the battalions... Don't plan it at the brigade level."

missions down to the battalions and tell them they will have to plan for a breach. Have them backbrief brigade on the mission to explain how they are going to do it. Don't plan it at

the brigade level. We didn't know what "right" was. That was the bottom line. We had so many guys at the staff level who hadn't done this, and even at the battalion level, who were all going through a

learning process while the clock was ticking. Eventually you have to execute it.

The actual mission plan was good. But we didn't allow the battalions or squadron enough time to plan it and practice it all the way down to troop level. Then they had to execute it without a lot of rehearsal. Totally the fault of the brigade. And, you have to have a timekeeper and this time we didn't have a timekeeper telling us we were way behind. We needed someone telling us, "Get the mission out," and "It's time to rehearse," et cetera. As soon as you get the mission, you set up a time sequence that allows you to monitor all these things so you give these units two-thirds. The point is, even if it's an average plan, get the average plan out to the units on time. An average plan well-rehearsed will be much better than this ideal plan with no time to rehearse. You think you know that going in, but you let yourself get overwhelmed with TOC movement and other missions. It becomes a vicious cycle and suddenly time has gotten away from you and it's time to execute.

"...even if it's an average plan, get the average plan out to the units on time."

I think all aviators walked away from that attack, at least in the TOC, knowing that we need to understand and learn more about combined arms operations. We *think* we are pretty knowledgeable because we *do* have to support everybody, but if we haven't been around breaching operations or other ground operations, we need to get smart on it. We also need to learn how to work our own Kiowa Warriors with our own Apaches. At the brigade we didn't do well on Kiowa Warriors working with Apaches. It used to be we'd have OH-58 scouts working with Cobras and there was real tight communications and understanding between those aircraft. Now, I've seen situations where, for example, Kiowa Warriors might see some targets or might see a situation, and the Apaches, because they hadn't worked with them a lot couldn't provide the teamwork needed. Two totally different type of aircraft. The Kiowa Warriors primarily work with the CAV themselves and not with the Apaches. They did a little before NTC but not enough. So when it

"When it came to actual missions, there was not that synergy between the scout aircraft and attack aircraft."

came to actual missions, there was not that synergy between the scout aircraft and attack aircraft. That causes some challenges.

28. JSTARS Missing Link

The enemy did have a really good obstacle belt set up, we did have to conduct a breach. But I found out something very interesting later during a meeting with the JSTARS folks. We went before the National Press Club and briefed on JSTARS. As it turns out, they showed me a picture of this particular battle with JSTARS and the obstacle belt was clear. JSTARS could spot the barbed wire. We were using JSTARS during the rotation, but I didn't know the full capabilities of the JSTARS. The JSTARS feed was going into the Star Wars building in a very clean, prim environment so everybody can go, "Hey, that's a great picture." And in fact JSTARS was giving us a damn good picture of what was going on. We didn't have trained operators who could trigger us, to tell us that JSTARS was picking up an obstacle belt. And we weren't getting direct feeds that the staff and I could analyze.

It would have been immensely helpful. All night long one of the roles of the CAV Squadron was to conduct a reconnaissance, find weak points in the obstacle belt. Zero illumination, very, very dark. Guys are maneuvering. They get engaged by the OPFOR and besides killing OPFOR, they end up with fratricide. It's a real confusing situation out there at night. And to be honest, these ground guys hadn't done a whole bunch of night maneuver training because of training restrictions, and it was a concern when we went out to NTC. Every plan we did I had to think, do I think these guys are at the training level to execute this mission? I would rather not even execute the mission than send them in a valley where they are going to flip their tanks over. I knew the battalion commander, S3, XO, and I'd go down and talk to the crews beforehand but you just don't have a complete feel. The battalion commander has told you where he stands, but how far can you push these guys before you push them beyond their limits? This is a concern.

I thought one of our weaknesses was we didn't have enough light infantry, dismounts, during the rotation. What the OPFOR is good at is they'll infiltrate guys all over the place on the battlefield and they'll watch you all day and all night. When you get their reconnaissance map back it has where your FARP was, et cetera.

What I realized after the fact was JSTARS, and of course UAV to some extent, but JSTARS especially painted a nice little obstacle belt. We could have used that a lot better than we did because the CAV Squadron was out all night doing the reconnaissance, starting to probe, looking for obstacles. The goal was never to do a breach. The goal was to find a hole in their obstacle belt and punch through. You try to do that as you're doing your night reconnaissance. That wasn't real successful because it took them a while to get out there and it was a pretty decent obstacle belt. I never physically met the guys from JSTARS to explain our mission... here is our focus, and how can you help me? I told the JSTARS folks I think a missing link is how do they find out what my commander's intent is, what is important to me? So you can focus them.

"JSTARS painted a nice little obstacle belt."

With better JSTARS coordination they would have recognized the connection between the picture and the mission and said, "OK, CAV Squadron, here's where they painted the obstacles, we think there's a weak point down here. Really focus your efforts there." Then I think we would have been successful, and may not have had to do a breach. The CAV could have opened up a hole and punched through. As it turned out, we went into battle and the CAV got up to the obstacles, and the armor battalion got up to the obstacles, and they started taking fire but doing pretty well. Then an anti-tank weapon took out almost half the armor battalion at the point of the breach. The AT at NTC can very effectively reduce the MILES exposure of their vehicles. So it's remarkably difficult to take out the AT. It was really frustrating for him; frustrating for me to see. All these guys are out there exposed and the AT is taking them down one by one.

I think that was really the first time a BCT had used JSTARS fairly consistently so we learned a lot about it. They had a great picture during the breach but that was untransmitted or understood as far as I know in my TOC. My S2 was very sharp and did a great job on IPB. And, during the spoiling attack he did receive a pretty good read on JSTARS and said we think they've committed and here's where they are going. But it was such a busy, intense environment, we didn't learn as much as we should have. One of the things I found was if JSTARS spotted something, we used that as a trigger to send a UAV to go out and confirm. UAV is like looking through a soda straw. So if we find something we are interested in, then we send the

UAV. You have this little UAV over here, and it is so accurate you can use it to shoot artillery if you get a good target. We were starting to kill things. But that's just individual targets.



The UAV can become the focus of the TOC. But, that is such a small part of the fight and there is a danger there. You only have so many people to go around, and if the battle captain or the TOC officer is looking at the UAV, they are missing the point. They really have to be

“The UAV can become the focus of the TOC. But, that is such a small part of the fight....”

doing analysis of what is going on right now and the big picture. Let a captain or NCO work the UAV. That should not be the TOC's sole function.

UAV did some good stuff but be careful about being too focused on it.

29. Aviation BCT Challenges

Our strength should have been aviation planning but our TOC was physically disconnected from what was normally the aviation brigade assembly area. We were now located where a maneuver TOC normally would be. It's unusual for an aviation brigade headquarters to be disconnected from the aviation assembly area but we were more like a regular maneuver brigade headquarters where you are physically separated from the aviation brigade assembly area who are

in the rear for artillery protection. If you want to talk about attack helicopter planning, you call up to the attack battalion commander and come together and talk through it. So we didn't give them as much of a planning focus as we normally do because we were now not co-located as well as being split focus. We were trying to find out how to plan armor, artillery, and aviation altogether. So, what I thought should have been a strength was actually a weakness. We have to figure out how to maintain the same level of aviation planning we normally conduct and still be able to plan a ground maneuver fight.

Also, there is a further challenge. Where do you fight the battle as an aviation brigade commander? That question comes up and I throw it back out. Everybody flails with it. At NTC there are basically three valleys that you fight in, the Central Corridor, the Northern and Southern Corridors. Apaches were generally flying in the deep attack in the

“ Where do you fight the battle as an aviation brigade commander? ... that often was on the ground in the Central Corridor.”

Southern Corridor and the Northern Corridor. Most of the ground fighting was taking place in the Central. I think the brigade commander should be where he can most influence the fight and that often was on the ground in the Central Corridor. If that is the case, then you have to be forward in a vehicle. I had a 113 I borrowed from 2nd Brigade I was riding in. So I would be working the ground fight talking to the armor battalion commander and the CAV squadron. My deputy brigade commander ran the TOC. Then the S3 and I ran the mission so he was able to bust away during the mission and be out in a Blackhawk usually while I was in the 113.

At the same time, the Apaches now are moving in these northern and southern valleys. How do you talk to these guys when they are in the air behind mountains? You can't. So what we did was we bumped our S3 out in a Blackhawk and tried to perch them. That is typically what I have done in an aviation brigade is perch to control the fight. They had difficulty with radios. Radios didn't work well. Apaches are basically line of sight so if your Apaches are back behind the mountain, you have lost contact with them. So then you have to figure out how to do retrans. You put a retrans up on a mountain. You only have so many retrans. If you are working all three valleys where do you put your focus in terms of commo? That is something we got

better at, but we could never fully take TerraBase information and really do a detailed analysis of the valleys. Where is the best place to put retrans vehicles so you can talk to the Apaches when they go in deep?



We tried UAVs, which can retrans but it's not secure. We used that for deep attack. As it turns out, when I talked to the JSTARS guys last week, I found out that they also could have relayed. They have a huge radio system so as JSTARS was airborne and our Apaches went deep, I could have relayed or retrans and could have at least talked to them and had them relay to the flight lead.

30. Safety and Fratricide at Live Fire

My number one concern was safety. It was anywhere from 110° to 130° almost all the time in the box and it was zero illumination. It was the worst illumination period you could have. When you have commanders coming to you saying they haven't been able to train up at battalion level with night vision goggles and night driving, we had to be really careful with what we did. So when we did do missions, instead of making them hit the LD at 0400, we would set it so that they might be traveling a little ways in complete darkness, but at some point it is going to start to get light enough so they can actually be in a safe condition in

the areas they are going into. I was not going to put anybody in a dangerous situation just to maneuver guys. There were a couple times, had they been better trained in terms of night vision or had more night driving experience, I would have definitely sent them in some of the areas at night earlier to position for attack. Safety played a role, as it should for every commander, as to when you trigger the guys to go. We walked away and we didn't kill anybody and no one got seriously injured. With the amount of aviation present, the poor illumination, and the high temperatures it was pretty successful to walk away without serious injury.

But as we were going through the battles, we had fratricide out there. Because of the way we conducted our force on force missions, ours was a pretty fluid battlefield. I don't know if they compare rotation fratricide but I thought we had more than we probably should. Some of it was very eerie and it goes back to Desert Storm, when an Apache pilot picks up a target but is not sure if it's OPFOR, shoots, and it turns out to be one of our 113 smokers that has a big thing on the back that you are not used to seeing until you go to NTC. You start to hear the radio traffic. Friendly vehicle killed.

"You start to hear the radio traffic. Friendly vehicle killed."

NTC puts these guys in a situation to make them realize you have to have good graphics on your map. One of the things they push at NTC a lot is to have graphics down to the lowest level. That is a huge challenge to get it to the lowest level, to the tank crew and Apache pilots. If you are able to do that, then they have situational awareness. It is a challenge in a non-digital environment. Going into the live fire, it is a concern that if you have some fratricide in force on force, are these guys really ready for live fire? The BCT steadily improves over a period of time, you get to the point where your staff and commanders are ready for live fire.

By live fire you're working smart with the artillery. The Apaches did a mission separate from the ground maneuver guys. We incorporated the mortars. Engineers got to do some really good obstacle placement. During live fire, we got to use the Bangalore torpedoes. Live fire is like a graduation exercise at NTC. It's not a range. It's very wide open, but very controlled in terms of safety. Another unique thing is in the rehearsal and discussions of maneuvering the elements in a live fire, now you have to really worry

about safety danger fans. Before in a non-live fire environment, if you happen to have that tank next to that other tank, or that Apache that may be a little close to MILES, no one is as concerned. When you get to live fire, you are worried about the safety danger fan of a Hellfire or of a mortar or MLRS when it shoots. You better have that grid square clear and everyone accounted for.

When you go through some of your mission rehearsal, you have to think when I move this COLT team up on this mountain, is he in a safe zone so when the M1 is driving by is he in a safety danger fan of that particular weapon system? You should be doing that before you get to the live fire. They try to tell you to do that. It takes some time and thought. You never get to that point until you get to live fire and walk through those steps. Even when we did go live, when we thought it was squared away, we still had a COLT team that was questionable. I think we had to pull them out. It's the right call if there is any question in anyone's mind. You have to walk it through. In combat you would have to think through that too. In force on force they will brief you and say, "This TOW fired and there was a fratricide because an engineer vehicle pulled up behind your TOW vehicle." These are some of the lessons you don't fully learn until you go to NTC. You see it more clearly with all the digital readouts. It's common sense but you can see how that kind of fratricide happens in the fog of war when guys are moving around the battlefield.

31. Apaches in Every Valley

We set up a defense in the Central Corridor. The intent was to take a risk in the Southern Corridor and force the enemy to the northern valley. We felt if their strength could bust through the Central Corridor, we would probably get overwhelmed. We put the CAV squadron in defense in the Central Corridor. I used the armor battalion as a reserve. The intent was to send them north. We wanted them to go to the northern valley. Here's where JSTARS did give us a good read. And sure as heck, they clashed with the CAV squadron in the Central Corridor and got into a huge fight. They decided during the fight to swing the main body north, exactly what we wanted.

The CAV squadron commander and I had a little miscommunication. We had a Canadian unit, the Coyotes, great reconnaissance vehicles; we sent them into the southern valley and they

actually got into the rear area of the OPFOR. But their intent was to watch that Southern Corridor and inform us if they were swinging to the south. I wanted the CAV commander to send Kiowa Warriors to the northern valley and watch that corridor with air CAV. He thought I meant the northern part of the Central Corridor. So when it all came out, we basically left the north open.

We had JSTARS. The S2 called them for a read, and then he told me he thought they were swinging north. I said, "We have a big battle here in the Central Corridor. The CAV is heavily committed. I don't see that." He said he thought from the read he had been given by JSTARS that the main body was swinging to the Northern Corridor. I wanted to see the situation develop a little more. Essentially, they had almost equal amounts of forces going at us in the Central, and now they were swinging north. The danger in this fight was I didn't want to commit the 1-67 Armor reserve in the wrong direction, because that was exactly what I thought the OPFOR wanted us to do. If they could make us swing in a direction that they were going to be weak in, then we would commit an entire armor battalion in the wrong direction. So I held them.

They got chemical attack while they were waiting, which made the armor battalion button up. They were going through some real challenges. Now the S2 was saying they were definitely going north. At the same time, the CAV commander was saying he was starting to get overwhelmed in the Central Corridor. So I told the armor battalion, to chop one tank company to the CAV squadron in the central valley, and move two tank companies north to block that passageway because the enemy could work their way in the rear area. That is exactly what we did and by the time we sent the one tank company to the CAV squadron, they had lost almost everything in the CAV squadron. It was a brutal fight. The CAV and they continued to fight with the chopped tank company. Now the armor battalion was starting to swing up into the northern valley.

The OPFOR moved so fast that it turned into a meeting engagement almost in the rear area. They move extremely fast and know exactly where they are going. It turned into quite a battle there. They also came over the mountains from the northern valley into the Central Corridor going through some paths they had figured out. They came into the rear area of the CAV. Again, the armor engaged those guys. So it was a great fight. At the same time we were sending Apaches up north, and they were killing. And Apaches were in the Central Corridor. The Apaches were also in a reserve role to do what we call over-the-shoulder fire.

They stand off from our friendly armor and use the armor's ground guys who are keeping the ground engaged; but the Apaches use their standoff capability to kill from a great distance which works pretty well. It was probably the best battle we had.

Had I had to do it over, I probably would have committed the armor battalion earlier. But I was afraid to commit them in the wrong direction and then we would have lost them totally. I didn't trust the read

"I didn't trust the read I got from my brigade TOC compared to what I was hearing from my CAV commander."

I got from my brigade TOC compared to what I was hearing from my CAV commander. He was in a brutal battle and he was getting attrited. If we lost the Central Corridor, we lost the war. What's the decision? Do I let them get beat up in the Central Corridor and block off the Northern? I decided to get

one tank company to support the CAV in the central and two to the north. But I didn't commit those two to the north early enough to cut them off before they got pretty far back into our rear area. 1-67 fought and maneuvered great. The CAV had an exceptional battle.

We were also always challenged by having the one artillery battalion with two MLRS batteries and one Paladin battery. Who do we give priority to? It's a constant challenge and I thought we had it pretty well thought out. The challenges are if somebody starts to get overwhelmed, suddenly you want to call artillery to support them. Now where do these guys shift to? Now they've got to shift their entire focus to another unit and they've been doing all this planning for another unit and we've got to be smart about how we do that.

32. Rock Drills for a Common Picture

After you get the mission, go through the rock drill rehearsals. As much as possible, the brigade commander really should go to every battalion-level rehearsal. So you might literally sit through six hours of rock drill in 130° temps. That can cook your brain in kevlar, but you have to do it. Make sure they understand the mission. You can then fix it right there if there are misunderstandings. If two rock drills were going simultaneously, then I would attend one and send the S3 to the other. We'd split our forces, and then come back together and exchange info. Most of the time these guys were so sharp that they were on track. They knew the mission and came up with some good plans. And, you don't

want to have to say, in the middle of a rock drill, “Guys, you have this all screwed up.” If they don't understand it, then either the commander's intent was not clear, or the order was screwed up. Fortunately, I think the orders we put out were pretty decent as long as we got them out in time. It helps you grasp the overall concept by going to some of these rehearsals and seeing what these guys are doing at the company or troop level. Because you are only thinking at the battalion level and you have to be thinking at the troop level. How are they are going to maneuver their forces?

And then there is the aviation piece. You need to see what the Apaches are doing and generally they are going to go deep and go to the rear area. That was the mission I was most comfortable with, so if I had to miss a rehearsal, that was the one I missed. Our strength should have been aviation planning but they make mistakes too. So they're still important to watch. You assume that because you knew what you were doing, they knew what they were doing. As soon as we got the order, even a warning order, anything that made sense enough that you could bring the commanders together, I would go to their sites, but ideally we would get them together at one time.

I think the AAR process is also a challenge at NTC. Everybody has AARs going on. That complicates the time. You have to schedule around them. Probably one of the biggest mistakes was not immediately corralling the commanders after every single mission change to talk it over, get ideas, plus backbrief the staff to say, “Here's what we think is the best concept. You guys start to plan for it now.” Instead of going through this course of action drill, we go back and say here's the course of action and generally what we're thinking about. Now you guys flesh it out, get the plan together and put it out. It's basic stuff. One-third/two-third rule, get the commanders together. The trainers keep driving home to do simple planning. It sounds easy but it's hard to do a good simple plan. Simple is easy to execute. The tendency is to get too complex with too many moving parts. You have to get airspace control and management down too. You have Kiowa Warriors doing reconnaissance with the CAV, and you have Apaches flying around them. You have to get these air routes. Something you thought was simple is starting to

“Probably one of the biggest mistakes was not immediately corralling the commanders after every single mission change...”

turn complex.

During train-up for that rotation we worked our way up. Starting with platoon and company to battalion and up to brigade and then you go to NTC. You work your way up. But, what kills at NTC is lethal company and platoons, a small unit capability. So should it be reversed? The CG will reverse the train-up for this next rotation. This train-up we'll do simulation training with the staff and work our way down so just before we go to NTC, the platoons are ready and freshly trained up. Train up a brigade staff and work your way down so by the time you are going to NTC the lethal platoons and companies just finished their lanes training.

LIEUTENANT COLONEL DOUGLAS BOONE, 1998

33. Sensing the Battle

One of the best examples of where I was in the situation as a decision-maker was in the NTC train-up at Fort Hood. We were defending. It was actually the task force minus and the battalion minus. We had two companies defending and we were being attacked by 2-8 CAV who was working as the OPFOR. They were attacking and trying to find a point in which they were going to attempt to penetrate and attack our lines. Well, anytime that you are defending, the staff tries to gain information to tell me, the commander, where they assess the enemy is going to attack, the point of penetration. What that then does is key a trigger of events of positioning. If they are coming into a place where we are weak, or perceived to be weak, and not attacking across our front, then you reposition and get all your forces at the enemy's point of penetration.

As the commander, you try to put yourself into the best place where you can see and feel and sense the battle and you get a lot of things through radio traffic. You can't see everything, but you try to find that point where you're not in the thick of things because you don't want to be at the point where you actually have to fight, but you need to be in a place where you can sense and see. Well, you sense by seeing and hearing and almost feeling at that point. In this battle, we were defending. The enemy had attacked through the night, and now it was the early morning and he was getting ready to try to make his penetration and find our point. I am listening to the radio traffic and our staff is taking in the spot reports. The enemy is being seen, and they're counting the number of vehicles and location. With the spot report, the staff takes that in and tries to paint the picture to me. They tell me, OK this is our assessment. As the typical commander, I'm asking the same questions to my staff, OK, tell me where they are coming, what's your assessment, where is he going to try and make the penetration? Because I need so much time to reposition my forces, to stop where the enemy is going to make the point. Well, the staff doesn't have the same perspective. The staff is sitting back in the TOC and they are trying to redevelop the approved radio traffic and other people's spot reports. They are not there. They're off and away. They're more sheltered.

They have the map board out and they're taking in everything and plotting friendly and enemy. And, from that picture, they try to then visualize and give me their assessment to help out. They help synchronize many of our assets.

In this case, I am waiting to get the staff to help me; looking for the triggers, looking for the enemy situation. And I am getting ready to move assets. And I say, "Where is the enemy going, where is the enemy going to be?" The S2 reads the spot reports, reads his templates and says... he is going to the west, that is where he is going to make the penetration. The staff is getting all these inputs and they are convinced the enemy is going to the west to make the penetration. Now, I am right there, but seeing and feeling a different sense. I am starting to see what he can't... smoke generators being built up and I start seeing some indicators that he had some forces there but he wasn't going west. There were indicators that he wasn't really pushing. You can't sense that unless you are there. Now I am starting to see that he is, in fact, going to make the push the other way. So, my staff is telling me to go one

"There were indicators that he wasn't really pushing. You can't sense that unless you are there."

way but because I am there, I'm able to see indicators and feel indicators, and hear indicators of sight and sound to know the

enemy has just a feint on one side and he is, in fact, pushing to the other. Instead of pulling the trigger and committing forces the way my staff is telling me, I overrode my staff and said no, we're going the other way. I think he is going and pushing the opposite end and we are going to push and leave our forces over here because that's where he's going to go. And, in fact, he did.

I didn't go with the staff's assessment; I went with my feeling because I was there. That was the right outcome because he feinted one way and then pushed the other. And we were certainly in a much better situation to stop the enemy. And it goes back to what we are taught, that the commander uses his information, uses his staff, but he has to be at a point on the ground so that he can see and feel and get his own assessments. And then he has to make the decision. Does he feel he is in the right place and he understands the situation, or does he accept the complete assessment of somebody else who is not there?

As much as we do this thing in the Janus exercise, in the CPX, you have to really get there and have an OPFOR who is a thinking OPFOR and are putting up indicators of sight and sound, smoke, artillery, to see there is a difference between someone who is trying to make an attack and someone who is trying to set and feint. I learned my lesson of where to position myself and just how key it was. You go through the plan and you can position your companies and you can position your reserve. But equally important is where do I position myself. And then when you fight with the task force, you can usually fight with your S3. You have to plan on those things. I also learned to have the S3 in another portion of the battlefield because his eyes are more experienced. He's a field grade who is generally experienced. And you learn the company commanders are fighting. They're in the throes of the battle, and their assessment of their ability to assess is sometimes limited. They are in there, moving vehicles and returning fire, and it's pretty tough to then give an accurate assessment when you're having to dodge, lookout and move. We learned to position myself and the S3, and look at and actually study and plan where we would be during the battle. We were able to cross-talk and get a better assessment on one side of our area of operation. We learned we were better able to talk and assess by being there and being close and being able to feel and sense than the commanders who were actually right there in the middle of the fight. And this was one example of where as a decision maker I was given a bunch of information. You have to take both assessments but then finally you have to make a decision as a commander.

"...the company commanders are fighting. They're in the throes of the battle, and their assessment of their ability to assess is sometimes limited."

34. Stop and Fuel or Go Without

At the NTC, I had as many poor outcomes as I had good outcomes. One of my poor outcomes was directly related to a decision I made. It came down on one of our first attacks at the NTC, a hasty attack. We were attacking from west to east. Our zone or area of operation was the Central Corridor from the North to South Wall including the Valley of Death and Siberia. The enemy was defending to the east around Hill 720, mostly in the Central Corridor. Well, the initial plan the brigade

came up with was to attack straight on, with two battalions going straight down the Central Corridor, which is what mostly happens. In this case, they (the OCs) spread the area, the attack zone, much further from north to south and gave us the option of going a different route, a different axis. The brigade commander thought about it and said we have the opportunity, perhaps, to do an end run with one force. I said, “Sir, we have got to try this thing.” We were certainly concerned because it’s much further along and much more difficult to synchronize

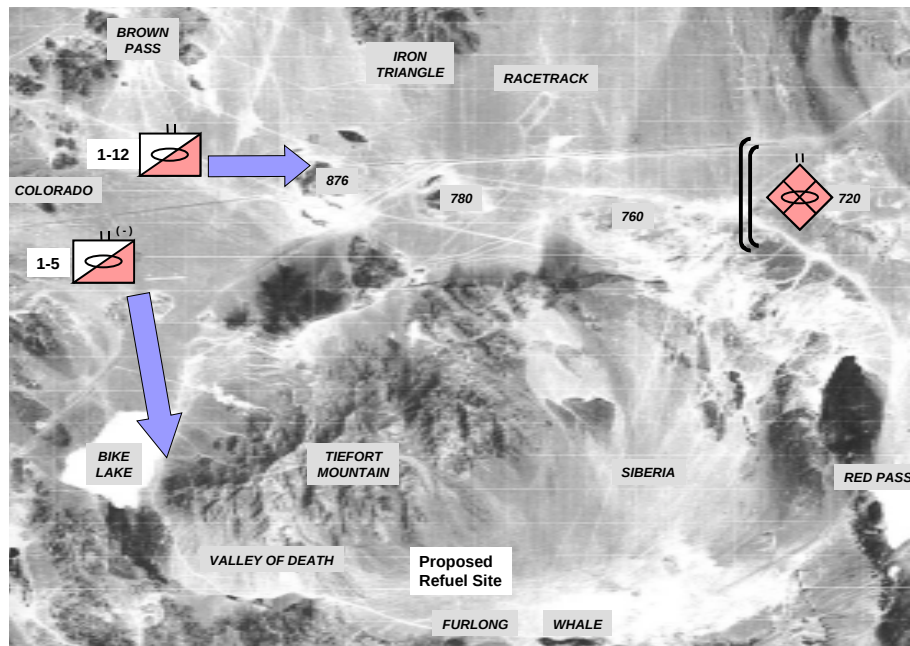


Figure 9. Brigade Combat Team Attack to Hill 720.

things. But every brigade gets an opportunity to attack straight down the Central Corridor. Who gets an opportunity to do something like this, something much more dynamic?

But whenever you do something that calls for greater distance, a longer move, it calls for much more deliberate planning... time factors, certainly logistics of moving a mechanized force 40 to 50 kilometers. It calls for more planning, more detailed planning. You usually have about 48 hours from receipt of order to execution. When you’re not prepared or not used to the turn around, you know some of your planning will be more hasty than deliberate. The Colonel gave me the

mission. It was a supporting mission, supporting attack. It actually took a company away from me and gave it to 1-12, which was the main effort. I was going to be the supporting effort with a task and purpose of coming in from the flank to the Valley of Death, coming up from south to north, up through Siberia, trying to attack over the hill, and then either draw the enemy away or keep them from reinforcing and moving as reserves. That would then allow the main effort to breach, penetrate the enemy's defense, and push on. I was going to attack onto a flank. Certainly, the intent was, if I could get to a point and establish an attack by fire position, to destroy the enemy on the other side and/or keep the enemy from repositioning. Then he would be weaker at the point, so 1-12 would be successful in penetrating.

Well, this was my first NTC rotation, and I'd heard about it, but until you actually go through it, you just don't realize how difficult the terrain and the environment makes *anything*. As simple as it sounds, repositioning your forces is difficult. We were positioned in the Colorado Wadi area and getting ready to attack. We get the mission. We had the plan. We were trying to go through it. We were supposed to cross LD the next morning when the sun comes up at five-thirty, six o'clock. Part of my plan I knew needed to happen was to get my fuelers up to a point on the LD to refuel all my vehicles that were doing the screen and the counter-recon and securing the LD. They were out there and they needed to be refueled before we took off on this 25-30 kilometer move the next morning. Because of the rugged terrain and how difficult it is to find your way around at night, circumstances have it, the fuelers were not at the LD and had not completed vehicle refueling when it was time to go.

Now I'm faced with a decision. I have some combat power, but I have some vehicles that are not topped off. So, do I stop operations and say to the brigade, I'm sorry but I'm not ready to go or do I go with what I have and try to make it to the objective. My plan to have everybody refueled in the morning is not happening because the fuelers had not all made it there; they had trouble getting there the night before. The support platoon leader

"...do I stop operations and say to the brigade, I'm sorry but I'm not ready to go or do I go with what I have and try to make it to the objective?"

couldn't find all his guys to get them to the point... So, here I am, what do I do? Do I call the boss and say, sorry we can't go, or do I go with

what I've got? I said, "Fuelers follow me." We'll get to a point somewhere close to the Whale Gap on the north side, before we go to Siberia and start attacking from south to north. We'll stop, do a tactical pause and refuel at that point. We have got to cross LD and get ourselves into position. There are different phases in an attack, but one of the things you have to do is get your forces postured to a point and then you do your last jump off. We had a long move to get from where we were to a point where we could start influencing the fight. So, my decision was to go with what we've got, we'll get to a point, then refuel, posture ourselves, and then continue the attack.

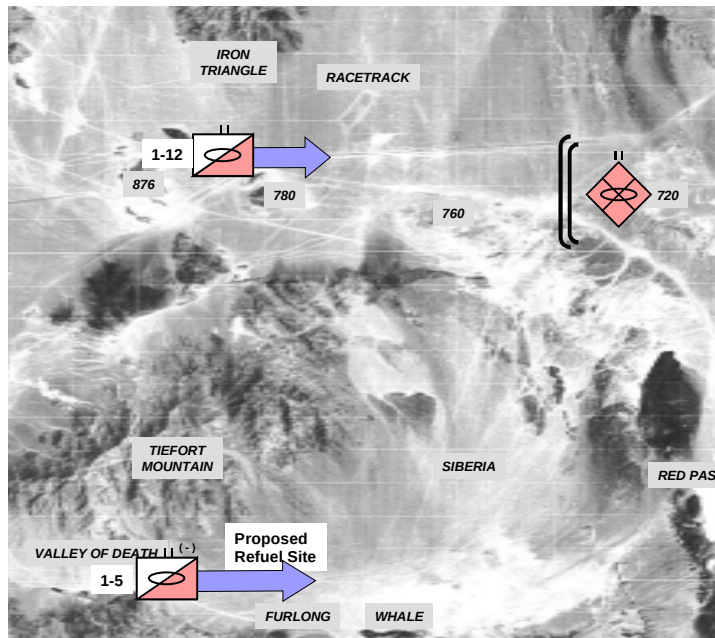


Figure 10. FRAGO to Refuel at Furlong Ridge.

Of course things never go as you plan. I was convinced that, with the route we were taking, we would move in a covered and concealed position and the enemy would not see us. Well, you don't sneak up on the OPFOR at the NTC. They have eyes all over the place. As soon as I started making my move south, around the Bicycle Lake area and

"Well, you don't sneak up on the OPFOR at the NTC."

through some narrow areas, he had positioned eyes and had caught me with artillery

going through that area. I lost 5 or 6 Bradleys to artillery. So, I know he has eyes on me. I've lost the element of surprise. He knows I'm there. He's not sure where I'm going, but he knows I'm going further to the south. I needed to keep moving because every time I slow down he's able to put effective artillery on me.

And now I get to my point, where I was going to go to a tactical pause, bring up my fuelers, fuel and bring my force together to concentrate and mass the force to continue on. I'm to the point. I'm getting artillery on me. I know I have to refuel. My refuelers were unable to keep up because of the rough terrain. They are back at least 45 minutes behind me. I get to my point and I have a viable fighting force with some tanks, with some Bradleys. I'm down to ten or twelve. Five or six tanks, five or six Bradleys. And my task and purpose is to first, get up and occupy the attack by fire position. Certainly it will fix the enemy and prevent him from influencing the main effort. I am still the supporting effort. My task and purpose is tied to the synchronization of when 1-12 is going and where I need to be when he starts making the point of penetration.

Well, the NTC, because of the mountain ranges, it is very difficult to maintain communications across 8-12 kilometers. You have the main mountain range right between where the brigade commander is and where I am. So, now I lose communication with higher headquarters. I am unable to determine exactly where 1-12 is in relation to me. I am unable to communicate with my boss to get a refinement. I'm still going off of a plan. I know what his intent is. I know where he wants me to be, but he needs to know my situation.

I'm at a point where I can go with partial force. Or, do I go to ground, take the time to refuel, rearm, refit, bring together my force and then go forward? There are advantages and disadvantages to either way. Do we have the enemy leaning toward me? Is my fellow battalion commander doing well? Does he need me to move up and go because if he's stopped, then the enemy is able to shift his artillery concentration? So there are advantages of moving up but if you get up there and you don't have enough combat power, enough punch, then you're unable to accomplish your mission. I'm faced with all of these things, and I'm faced with the break in communications. I can't talk to him. That is really the dilemma of this battle, and many battles, is that when you're out there on your own, you don't have access to the higher commander's current intent. What does he want me to do with my force?

I am the supporting effort. I need to be in a position so the enemy is faced with fighting us from both directions. I am supposed to be in a place that keeps him from putting all his assets and focused effort on 1-12. 1-12 is supposed to make the penetration and defeat the enemy in total. I am supposed to fix the enemy and support. I do not have my combat forces in a posture to really be successful. I am faced with spread-out forces, my tanks are low on fuel, I'm not sure if they'll be able to make it or not. I'm also faced with needing to be at the place according to the plan and the commander's intent.

I call and I get an assessment from the tank commander. "Can you make it?" "I don't know, it's close." I am faced with enemy artillery possibly destroying more of my vehicles. I've already lost 5 or 6. So, without being able to communicate with the boss, I decide... We have got to go. It's 45 minutes for the fuelers to arrive. I can't wait that long. Forty-five minutes is an eternity to sit out here. We're going with what we've got. The plan remains basically the same. One force is going up

"It's 45 minutes for the fuelers to arrive. ... Forty-five minutes is an eternity to sit out here."

one side and at one point almost coming up on line. We are fighting a very difficult fight. We're going from low ground, up Siberia,

toward Hill 720. His main effort is on the other side of the hill, on the central valley floor facing 1-12. If we can push ourselves up and get up to the top, we are able to get into position where we can shoot down on the enemy.

We continue on. We get up and are doing very well. The enemy starts repositioning because he sees us now coming, and he's having to pull his AT-5s, and he's even having to pull some of his tanks and reposition toward us. He has committed his reserve toward us. We are making a good fight and even have a couple of Bradleys make it over the top and come down into position. But my tanks are running out of fuel and they don't make it to the top. So, I get to the right

"...a couple of Bradleys make it over the top... But my tanks are running out of fuel and they don't make it..."

position but I don't have enough combat power to actually hold my position, and the enemy is then able to counterattack and destroy me because I have piecemealed myself. And in fact I wasn't synchronized with

the other guys because he was a little behind waiting for me to get into position. So, the enemy was able to take care of me, and then turn his effort toward 1-12 and reposition. 1-12 was able to make the breach, get some combat force to the other side, and it ended up being kind of a draw with 8-10 combat vehicles on each side.

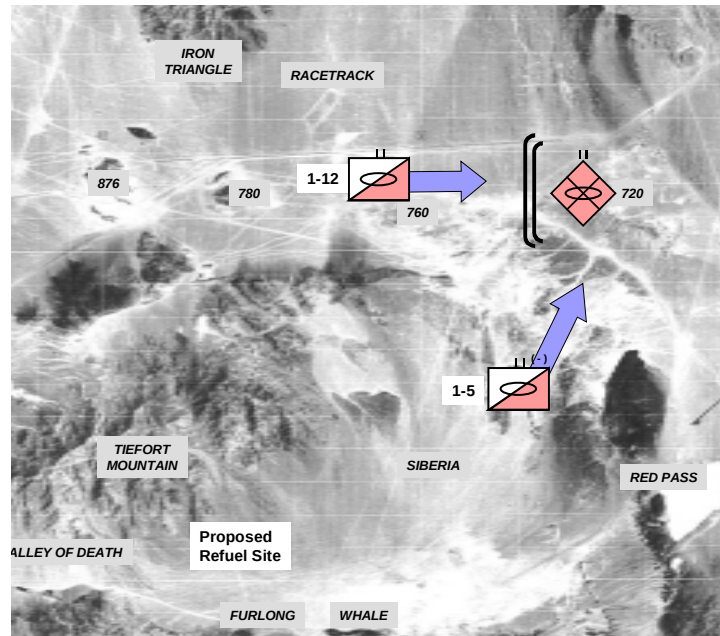


Figure 11. Attack Over Siberian Ridge.

The fact that we made a breach was not what all elements get to do, but we would have been much more successful (you never know) if I had waited for the fuel and concentrated my combat power and then moved on. Who's to say? Certainly, that was the training lesson of the day from the OCs. Here you've planned it, you know you need the logistic factors. The plan wasn't executed. You didn't have your fuel on the LD. Then you come up with a plan to refuel on the move. You didn't do it and you had tanks that literally run out of gas as they are reaching their objective. What did you learn today?

That's what you are faced with when things don't go as planned. What could have helped me in that situation? More information. If I had been able to talk with my boss, give him an assessment and let him make the decision. I'm fighting part of a brigade combat team. I am a

supporting effort. Had he known my situation, he could have been able to say, you go to ground, or the conditions are right, I need you to go there. We weren't able to communicate. He could have adjusted 1-12's movement, either to slow down or stop. Had he known I was taking the artillery, he could have adjusted his assets to give me some protection with counterbattery fire or other means. I didn't know where he was. I had also lost communications with even my TOC, who had communications with him. I was out there by myself. I was back to hasty. When you plan to do something as deliberate as we did then you really have to have, not only your maneuver plan, but you have to have your communications plan and your logistics plan to support your maneuver. Communications in this case was key. I was unable to know where the friendly forces were and certainly didn't know where the enemy was or what he was doing.

35. Too Many Changes of Mission

I watched my brigade commander when we were on the movement to contact in the Central Corridor. It was our first fight. I was the follow-on force. 1-12 was the lead element to go through Brown and Debnam Passes, attack from west to east. Their expected point of contact was around Hill 876 and the Iron Triangle. The first thing the enemy does to us is they get a good jump early in the morning and actually get to the decisive ground, key terrain. They are already on 876 and the Iron Triangle with some combat power, while we were getting ready to come through the passes. Then to make things even tougher for us, they throw FASCAM minefields right out there in the middle of one of the major routes in which 1-12 is using to come through the passes. This does everything that it is planned to do. It desynchronizes our timing in coming through and prevents 1-12 a viable combat force able to meet the enemy on a movement to contact.

So, now the brigade commander is faced with a dilemma. He knows the plan has 1-12 as the lead element and me with a follow-on mission. But, he sees the timing is out of place and 1-12 is unable to get his combat forces through the passes. He knows the enemy is continuing to march and is going to get all his combat forces into the 876, Iron Triangle area. If the enemy gets there, we cannot generate enough combat power to defeat him on that terrain. There is a marked advantage of owning that terrain. You can get behind hills and the IV

lines. The enemy attacks from west to east through the passes. You just can't generate enough combat power to knock a force off that ground.

The Colonel knows the combat reconnaissance patrols have already moved in and set the 876 line. That means that his advance guard is right behind him and moving close. And, if he doesn't get some combat power in there, defeat the CRPs and then get to 876, if the advance guard makes it there to that line, we don't have enough combat power in the entire brigade to defeat that force much less the follow-on main body. So he's got his lead element caught up in FASCAM. What does he do? One option is to fight it through and the other option is he commits me early, completely against the plan. He calls me up and says, I'm going to need you. He commits the brigade reserve back to me. A complete change in mission, I'm the lead element. I get on my internal nets and I start "OK, change in mission, here's the enemy situation, here's the friendly situation..." We're getting ready to go.

About that same time, 1-12 finds another route and starts pushing forces through so the brigade staff gives him a different assessment. Look boss, everything is synchronized to support 1-12 not 1-5. They tell him 1-12 is getting through and it's probably not the wisest thing to change mission. We need to let 1-12 continue with the plan and we'll commit 1-5. So as I'm saying, boss we're ready to LD in five minutes, he says, no, we're going with the original plan. 1-12 is getting through. 1-5 will follow. By the way, Reserve, you're *back* under the control of 1-12. Here is the reserve company commander jumping back and forth on radio nets, and who he's talking to, and who he's following.

So the Colonel was faced on the *first* fight with the dilemma where things are not going to plan. He knows the enemy is pushing, and he needs to get to key terrain and not let the enemy beat him there. So what does he do as he is trying to commit his forces? At the level of the brigade or even the battalion when you start changing missions, it's pretty easy for maneuver forces, we are pretty flexible. We go left, we go right and all that.

But it's the supporting cast that goes with it; the artillery, the logistics lines, even the medics and where they are going to set up aid stations. All are not quite as

"But it's the supporting cast that goes with it... All are not quite as flexible."

flexible. Where you have your targets for the artillery and where you have air support going in is all based on a plan that is somewhat

flexible but also takes some time to synchronize back to a change in mission.

I think all of that came into play. Especially your first fight out the door, you're not quite as responsive. When he said "Are you ready to go?" I said "Yeah I'm ready but..." Meanwhile, my guys are sitting in place and waiting for the situation to develop. And then I have to go in and change plans, and do it over a mapboard and say "Ok, here's what we're going to do. You remember this, this and this..." But it's different than the plan that we rehearsed and talked about. Even for a well-trained force, it takes a lot to be able to do a change in mission and a change in order and then issue a frag order across the radio net and then allow your subordinates to visualize your intent and now a change. Not easily done. It is facilitated if you have a plan with graphics, there is some built in flexibility. You still have to communicate that down with the intent to your subordinates and then give them time to pass it down the line. To have a battalion-size task force ready to change mission and go one way or another takes more than a couple of minutes. So, it was probably ten to fifteen minutes before I came back and said I'm ready to go. And in that ten to fifteen minutes, 1-12 was able to get through the passes. And we then changed back and said we're in the same mission.

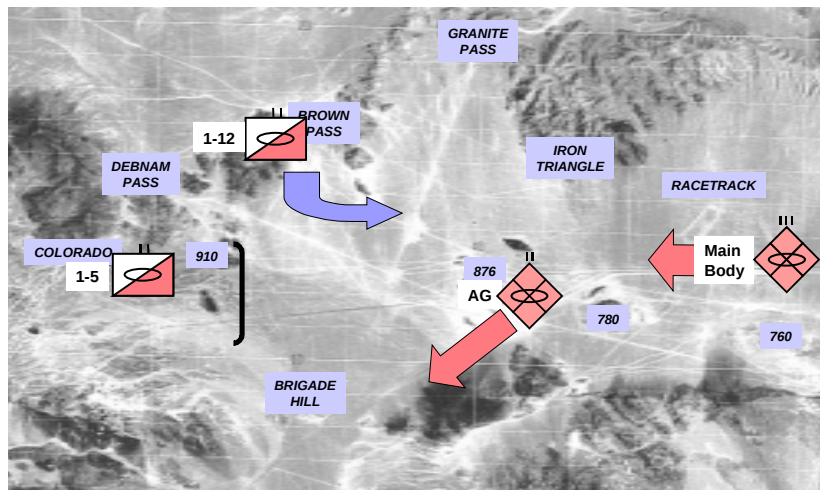


Figure 12. Meeting Engagement in the Central Corridor.

Well, just as he feared, our timing was off, our artillery was off, air support was off and the enemy was able to get his advance guard, which

is a battalion-size equivalent, right up to 876. He sits there defending and waiting for 1-12 to come out of the passes. Certainly not a good day for 1-12. Difficult to fight the OPFOR when they have the key terrain like they did. So, this fight is certainly not going the way the brigade had envisioned it.

The advance guard main body continued to push down the southern side of the corridor and we say, holy cow, is he going to continue to push south. Well, I'm postured on the south. 1-12 is attacking on the north side of me with the plan of him setting up in support, and then me pushing down the south and going into position to attack the main body around the Racetrack area. That's where they envisioned my task force meeting the enemy. Now, the indicators are the enemy is with strength. Is he going to continue pushing down the southern wall right south of 876, and just keep right on coming heading toward the Colorado Wadi? That's where I'm sitting, but I'm not in a good defensive position. I'm sitting back, postured ready to attack, and not really ready to defend. So, now I get the change of mission to move forward, establish a hasty defense, and stop any enemy that might come from 876. I get set.

But, now the brigade is getting more and more enemy spot reports and a read on the enemy. The enemy force attacks with his combat reconnaissance patrols and his advance guard main body and then he has the main body itself. The advance guard main body is the one the brigade saw and was afraid was going to continue to attack. They, in fact, just went to ground and established their support position right there. And the main body's plan was to continue to run the North Wall right on through the Goat Trail and right up toward Crash Hill. The enemy saw our condition and our posture, with me in the south still with strength, and 1-12 in the north, which had piecemealed itself and had been rendered combat ineffective. We had no fighting force in the north, no way of stopping them. We were concerned he was going to continue to attack in the south. I went forward, established a defense to stop the enemy. He just went to ground. We weren't fighting. Just looking at each other. But the main body is now pushing the North Wall.

So, here the brigade is now getting more information. And I get my next change in mission to pick up everything from the south and move to the north and stop the enemy's main effort as he was trying to run the North Wall. So, again I come up with my frag order off the mapboard. Based on the directive of the brigade commander, my

assessment of the traffic, and what was happening to 1-12, I knew I needed to get there with some urgency. The brigade thought and I thought that I would be able to actually beat the enemy to a point, establish a defense, and then he would come along the North Wall around the Iron Triangle and continue toward the Goat Trail.

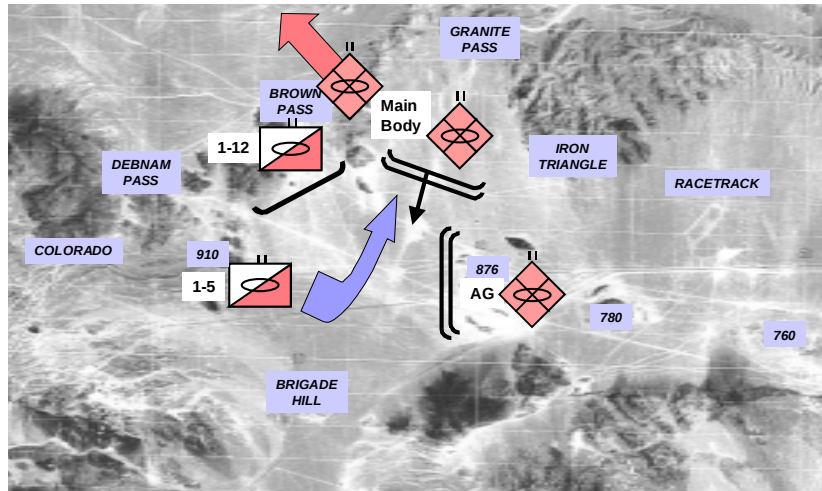


Figure 13. OPFOR Main Body Maneuvers North.

Unbeknownst to me, and the brigade at that time, the enemy had already penetrated. About the time that I'm getting an order to move north, he already had his lead elements across the Goat Trail and moving on. He established a firing line along the north protecting his route as he was coming out of the Triangle and heading toward the Goat Trail. So he's already established a firing line, and here I am committing my forces from south to north trying to stop him. I'm running right into his established firing line. I piecemealed my unit,

"I didn't think I was going right into a fight. I was going in first to establish one position in a defense."

where I was sending companies at a time up there and not bringing my entire task force up there into a hasty attack,

because I didn't know the enemy's situation. My assessment was to get as much up there as fast as I could. I gave a frag order but the companies are spread out in different areas and, based on different distances to move, your companies are going to get there at different

speeds unless you make a plan that calls for a link-up. I didn't think I was going right into a fight. I was going in first to establish one position in a defense and then everyone else comes online and then we'd really be able to fight a defense, not an attack, a hasty attack, against an enemy's firing line.

Based on my assessment and the brigade commander's of the enemy situation and my situation, I needed to get up there with a company at a time and then I would consolidate my forces at that point. What ended up happening was a company at a time going against a company on line. He had the advantage. He had the terrain. He could see me coming. With just a company, I piecemealed my force and was defeated. That company went to ground, and half of it was left. I brought in another company, and even a company and a half wasn't able to completely defeat this enemy force and I'm bringing up a third company. Still, because I was piecemealed, I was unable to defeat that enemy in his firing line because I didn't have a viable force and was not able to get into position. The enemy was able to continue to run the North Wall, and I and the brigade had failed on this mission to stop the enemy.

It all goes back to battle command, the commander being able to visualize the end-state that he wants. The enemy situation changes, the friendly situation changes, and you get to a point that shows you just how difficult it is. Even when the commander has a vision, it is very difficult to make it all happen in a synchronized manner. It is much easier in the cyber world of the computers and the CPX, where you're not going across rough terrain and the varying time-distance factors of synchronizing forces. There, the timing's correct and you have enough combat power to accomplish the mission. In this case, I know the brigade commander had a vision and he articulated it. He knew where he wanted us to be. We just weren't able to get there in the right posture and in the right time. I'm not convinced that any of us had an idea that the enemy had already beat us to the punch. They already had forces there and the numbers he had was already in the key terrain. It was our first fight, toughest one. Movement to contact is tough. We learned a lot of things that day and how important it is to concentrate your forces at the right place at the right time. I think we got better throughout the rotation and really tested the OPFOR in later battles. Every rotation is successful because you learn something.

LIEUTENANT COLONEL DAVID HANSEN, 1998

36. Engineers in the TOC

As an engineer, my job is to provide the brigade commander early assessment and the running assessment. The ability to provide the brigade combat team commander total terrain perspective with regards to: what the enemy is using it for, how we can best use it, where we can use it to our advantage, how to constrain it, how to expand it, and then of course how to reinforce it, and how to maneuver on it. In addition to the terrain, my job is to make sure the commander is fully aware of the capabilities and assets that the engineers bring to the party. Everything from the individual Sapper squads, in both the offense and the defense but also the weapon systems, Volcano, MOPMS capability, the small amount of direct fire we bring with M2s, and then hopefully, in the future the ability to bring anti-tank fire with the Javelin. The engineers will field the Javelin and give us a 2000-meter anti-tank capability down at the squad level, which will greatly enhance the brigade combat team's ability to fight in that mechanized environment. Then of course there is the ability to provide survivability support to the combat team, that is, digging assets. Finally, we bring bridging assets.

The engineer is a slice element to the brigade combat team. I own very few assets when the battle begins. I attach my companies and then I'm attached to the brigade combat team. The command support relationship I have with my companies is, I generally give them OPCON to the task force commander. I have fought with four different task force commanders, two on each rotation. Each had an engineer company OPCON to them. That enables them the ability to break them out any way that the mission requires.

The company commander goes to the task force with two line platoons, an assault and obstacle platoon, and his company headquarters. The individual company CP links in with the task force CP, with a 577, and becomes an integral part of that task force commander's TOC. He provides both the terrain analysis and assists in the IPB and battle planning preparation. And that is really a mirror image of what we do in the battalion for the brigade combat team. I do not operate a separate TOC. When I took command, engineer TOCs were separate. One of the initiatives that I wanted to bring to the 1st

CAV was to integrate the engineer TOC inside the brigade combat team's TOC.

A very interesting story. One that my first task force commander still marvels at, because he didn't think I could pull it off. I had been in command about 3 weeks and we had our first Janus exercise about 60 days out from actually conducting our first rotation. As a new commander, I wasn't sure how we did much of anything. So, we got ready to move to the Janus site and I directed my then S3 and XO to take our TOC and hook it up to the 1st Brigade's TOC. Everybody said, "You've got to be kidding me. That's the brigade commander's TOC. You can't do that." I said, "Why can't I do that?" "Because that's his TOC, you don't just move in." "Well," I said, "here's what we're going to do guys. We're going to hook up there and he's going to have to come throw my big butt out of that TOC. We're moving in."

So E8s, they'll take care of pretty much any job you want them to do, they hooked up and the Janus starts and in walks Ironhorse 6 and he says, "What the hell are you guys doing in here." I said, "We are here to stay." "Well, we'll see about that." And from the very beginning, the brigade combat team was able to get a synergy of current ops direct to the battle captains and the leadership of BCT. What we provide is an ability to see the battlefield, the obstacles on the battlefield, and give them instant terrain analysis on the battlefield--something that they did not have because the poor ABE, Assistant Brigade Engineer, was a captain sitting in there trying to do future plans as well as current ops--incapable of doing that. So, what we were able to do was take my S3 and current ops cell and move it in there with my TOC and provide real-time information to the brigade combat team. At the same time the ABE becomes a member of the planning cell and we take his infrastructure, his 577, and integrate him in with the planning cell.

Now I have complete engineer battlefield assessment as part of the IPB process to the plans cell, without conflicting with the current ops running of the battle, but with the engineer and terrain assessments necessary to give the warfighter, the guy who's out on the joystick, the current real-time information to help him make decisions. This is, of course, translated to the forward command group, the brigade combat team commander, the field artillery commander, and the engineer battalion commander. Those three folks are the forward command group. They are shortly followed on the battlefield by the TAC, which is the S3 of the brigade combat team. And, when we need to huddle up and make some quick command decisions, to change our avenue of

attack or to change our intent, then the TAC can come forward, the command group can rally up, and then we can talk with the TOC and make the decisions based on their assessment of how the situation is going. So, the first and foremost decision that I made as an engineer was to co-locate the engineer battalion TOC with the brigade TOC. As a result of that, the other two engineer battalions and subsequently the two other brigade combat teams from the 1st Cavalry Division adopted that process and now that is the norm within the cavalry division. I will tell you that is the norm throughout the corps of engineers now, two years later, because of the efficiencies that we gained by doing that.

The ERI battalion, engineer restructuring initiative battalion, is a very slim headquarters. Our battalion staff is 1/3 the size of an armor or mech infantry staff. We are that slim. Because we're a slice element, I don't maintain the assets on the battlefield. Those assets are given to the task force command. There is occasion where the brigade commander will retain control of certain engineer assets, digging assets, bridging assets, Volcano, scatterable mine delivery assets, based on METT-T and of course his organization for combat. But, for the most part, that command and control is given down to the task force command. I will tell you that it is very difficult for him to manage the assets that he has in addition to these extra staff slice elements that come his way. It is at that point that on the battlefield, generally, the battalion commander and the engineers will go with the main effort, and the S3 will go in the TAC vehicle in the supporting effort. We will monitor engineer activity and be of assistance to the task force commander, as another set of eyes on the battlefield, to assist him in the optimal employment of engineers in whatever mission. So, in the deliberate attack, making sure we have the conditions set with smoke, direct fire, suppression of the enemy, positive identification of the obstacle.

I have my own track as a part of the forward command group. My XO is in the TOC. I'm out on the battlefield with my 113, moving, observing the fight, getting to a point of advantage where I can see into the enemy's defense, say if we're on an attack. So, we can help guide not only the engineers, but the task force to the optimal location. Because, my God, here's a lieutenant colonel, the task force commander, who has no more experience than I have, commanding four maneuver companies. He's got artillery coming in, mortars, he's got air defenders, he's got engineers, and he is still *riding* in a weapons system, a Bradley or tank, and he is still trying to fight and move. How difficult can you make one man's job? I'll tell you, I have great admiration for

my fellow mechanized and armor brothers, because whew, they bite off a chunk. And I'm not sure how many of them really grasp that command business. It is almost overwhelming. When you're down in the wire and everything is falling apart. People are dying left and right, and the holes aren't opening up, and all of a sudden there is no smoke, no direct fire, no indirect fire, and the enemy is just bringing fires on you. All of a sudden you look around and the only people bringing whoopie on the battlefield are the yellow blinking lights that you own standing right there at the breach site. You just got to shake your head and wonder how that task force commander doesn't pull all his hair out.

The point is that as an engineer battalion commander, my assets are out there. I can sit back in a Rasputin mode and come over the net and say, "John, this is Lumberjack Six, you got a hole over here on the left and the enemy doesn't see it." Or, "John, your company just got wiped out, we need to bring more smoke over here..." I can provide battlefield assessment. I have the ability to assist him. I cannot direct him but I can sure help him. My other objective is to keep engineers alive on the battlefield. We did pretty good. Most of our battles, the engineers, along with just the battalion commander, were the only people alive at the end of the battle because we maneuver, not to engage, but to not be killed, so we can stay alive to get to the breach and then fight on past that to the objective.

In each mission, the engineer looks at the mission differently. Our three missions in the CAV have always been movement to contact; attack in some shape, fashion or form, hasty or deliberate; and defense in sector. And that, of course, can be a transition to a hasty defense or a deliberate defense. Generally it's defense in sector. Some people now call it an area defense, whatever the vogue term is. The engineer's part with regards to both missions, the success of the engineers on the battlefield, is in the preparatory phase. More so on the defense in sector, certainly, than in the ability to attack. But I will not discount the fact that home station terrain, and then the rehearsals on the prestaging battlefield, are so critical to success. Without them, you won't find that success.

And in those battles that are hurry up and knock em out and get em done, without the preparatory time, I can tell you we fared poorly in all instances. And you only achieve success under extreme conditions of a decent plan, ample time to rehearse with all players on hand, optimal conditions at SP when we LD, superior execution in all facets of the battle from maneuver, to fire support, to engineer breaching, to

command and control, to signal, to even the MPs handling the TRPs and getting people moving. All that, and then the enemy has to make a mistake because it is his turf, his ground, you're penetrating his backyard. He done dug that hole or fought that battle twenty times before and he has got to make a blunder or he's got to misread your intent. And when all those conditions happen, you have a chance of winning a battle at the National Training Center. Because if you can whip the 11th Armored CAV Regiment, you can beat any enemy in the world. Those are the guys who are the best. So, you put all those conditions you got and you say I have to strive for each one of those, under all circumstances, and in every battle.

All right, how does the engineer get to that point? The engineer starts at home station. He has a very rigorous home station train-up. When I took this battalion, my companies had only trained for the standardized 250-meter, three-row deep minefields. They could go out, put mines on the ground and watch. That's really great in a compartmentalized battlefield like Europe or Korea. In the big open warfare at the National Training Center, or Southwest Asia and Kuwait, et cetera, it's not going to cut the mustard. Two hundred and fifty meters is an anthill to you and me out here on the plains of Texas. So, my first rotation, I was not here for the home station train-up. I inherited the battalion following that and went through the headquarters gen-up with Janus, and the military decision making process with the brigade combat team. But, in the reality of things, we had not done a sufficient job at training ourselves to deal with the wide-open spaces and the magnitude of the avenues of approach that we have at the National Training Center. So, that took some adjustment on the battlefield. That adjustment occurs pretty rapidly when you transition into a defense in sector.

Defense in sector is the engineers' meat and potatoes. If it fails, the engineer *will* be blamed for a failed mission because it is our job to provide the countermobility effort on the battlefield, the obstacle play. We have to put in all those mines and all that wire. We have to dig all those tank ditches. We have to do all

“Defense in sector is the engineers' meat and potatoes. If it fails, the engineer will be blamed for a failed mission...”

that planning. We have to synchronize engagement area development with the maneuver guys, and we have got to get that tanker off his tank.

Making the tanker get on the ground two days in advance of the battle is the hardest thing in the world. Because he doesn't think about a battle two days in advance. But if I don't get him on the ground, then I don't meet the seven-step basis by which you go in and develop an engagement area. So, getting your fighting brethren on the ground and saying, "hey look dude, tell me where you want to kill the enemy from, because that's the engagement area out there, and that's where your task force commander and your brigade commander says that's where you're going to kill them. Now, tell me where you want me to dig you a hole." Well, two days in advance that tanker is not thinking about whether or where he wants a hole. Now, one hour before the enemy rams it down his throat he's going to be real concerned about where that hole is. But he doesn't realize it takes me six hours to dig that hole with an ACE, and don't come to me three hours into digging this thing and say, "Oops, I made a mistake, I really want it over here," 'cause it won't happen.



Then, of course, all those tankers want to be on the high ground where all the rock is and they want me to dig holes in rocks with ACEs that break when they hit the rock. That's a dilemma in itself. It is up to the engineer to convince the tanker that we want to dig him a top, first-line house here, a first-line survivability position, and he's gonna sit there and he's going to kill the tar out of the enemy and he's going to be a hero. But listen, *bud*, you have to pick a place where I don't die in this hole trying to fix it for you, or nobody gets anything. So, there's a dilemma too, and you have to dig early enough, because everybody

wants a home. Everybody wants a survivability position so they can all be heroes. So, we have to work early. It has to start early. And the tankers have to be as proactive as we are getting on the ground.

Now, I have some very strong points of view. It is currently counter to Army. It is counter to my armor and my mech brethren. I believe the engineers should pick where the armor and the mech infantry guy fights.

I believe that the ground commander believes that the brigade commander knows what they need for all the distances for all the those. I know exactly

“As soon as [the brigade commander] puts his hand on the map, way back in the planning cell, the field artillery and the engineer commander know what they need to do, to go out and set it.”

weapons system. I can go to the ground and I can pick a spot that will allow me to max distance and shoot throughout the length of the engagement area. So why shouldn't I go pick the hole, dig the hole and say, "if you occupy that you'll be a stud." But we still haven't worked through that yet.

We now have a lot of ADP terrain systems, where I can sit in the TOC and I can draw lines of sight from these 6 and 8 digit grid squares. And I can reverse shoot out of the engagement area where we then draw a square for the TRP. The field artillery commander can then go ahead and begin his planning because the brigade commander said, "Kill him here." We can put that TRP on the ground right there in the TOC. We can shoot lines of sight. I can put the distance on it, and I can put an 8-digit grid location at the end of that radial. I can say, without a doubt, if you dig this tank in *right here*, you will be able to shoot max distance to this TRP, intermediate distance to this TRP, and short range distance to this TRP. And you will slaughter the enemy. We haven't developed that planning technique on the other side of the house. Heaven forbid, an engineer should pick where a tank should go, or a mech infantry guy should go, even though we understand the terrain. The old philosophy is you have to stand on the ground. You have to get on your knees with a set of binoculars, and you have to see TRPs sitting out in the middle of the sand. And to do all that you lose six to eight hours minimum, because you have to get everyone there, you have to issue subinstructions, you have to travel to the location, et cetera.

It is a reality. There are so many tools now. In our planning, we provide those from the brigade down to the company. We've now bought computers for each of the companies, and we're going to shoot

those lines of sight right inside their task force TOC. So, the company commander, task force engineer, can hand it to the battalion commander and say, "Here's the radial. You want to kill here, here's the radial. If you go to each of the radials on this computer picture, and we dig a tank in at the end of each one of these, you'll just tear them up. It'll be ugly for them and you'll be a hero." We are bringing automation online to help prepare the battle.

The other aspects with regard to this is that once you establish the battle position, where you're going to fight from, you can't afford to move that halfway, six hours, in advance. And if you do, you have to be prepared to fight from the surface of the battlefield. You'll have no survivability. You'll have to fight from the wadis; you'll have to fight from the relief of the terrain. Because all the time has expired and the energy should have been spent doing that right. Because once the battle commences, I'm done digging. I have to get out of the way or I die. Same with the countermobility effort.

37. Unknown Avenues of Approach Along the South Wall

We had our heads handed to us in a battle because we didn't do a full and complete analysis of the terrain, specifically the Colorado. We were defending through the passes and to the entrance down past Matterhorn to the mouth of the Colorado. We had decided that we wanted to have the enemy come into a kill zone in Brown Pass, but we wanted to force them against the North Wall so that we could lay fires against them in the wadi. We did that because history says that the OPFOR enjoys using the wadi system on the North Wall. So we were going to give them what we thought they'd want. We wanted to ensure they were not able to penetrate the south part of the upper Central Corridor. We didn't want them to use Debnam. And we really didn't want them to get into the Colorado because they enjoy that a lot, and are able to use that a lot, and we would have a hard time routing them out of there with our assets. We'd probably have to fight them at the exit in the west if that happened. So, our two efforts were in Brown Pass, a turning obstacle that would force them to go to the North Wall, and then a series of minefields and wire obstacles in the entrance of the Colorado from Debnam all the way down to Brigade Hill but back behind Basalt Hill. A series of battle positions in there enhanced by obstacles. We shut off

the wadi itself with a series of obstacles so they wouldn't have a high-speed avenue.

We thought we did a pretty good job but what we did not know, which we picked up through aerial photography later, is that the enemy had along the South Wall, south part of the Colorado, several avenues that brought him into the Colorado on the south. These allowed him to run right along the ridge line and emerge in the west. The enemy was able to give us a pretty strong feint into Brown that fixed the task force in battle positions up in front of Crash Hill and on the reverse slope of Brown. They were able to send the

“...what we did not know...is the enemy had ... several avenues that brought him into the Colorado on the south..”

advance guard main body to fix the forces in the battle positions at the mouth of the Colorado. Then they took their first echelon main forces around that South Wall and were able to pretty much destroy everything in their way. The only force that had a battle position in their way was the company of engineers who had a battle position down on the South Wall. They went through them like hot knives through butter. They emerged and we determined what they were doing. We displaced throughout the Colorado and attrited a lot of that task force in that fight. We were able to reposition the majority of the forces in the actual reverse slope Brown Pass defense between Chinaman's Hat and Nelson Lake so that we could fire into their flanks coming in. But the enemy had already gained the high ground. They were able to set AT-5s up on the high ground and pretty much attrited us to the point where once they were able to pass the no penetration line west of Nelson Lake, they declared victory. Their combat power was certainly superior to ours.

The lesson learned there was that we, as engineers, did not do a sufficient job, a complete job, of terrain analysis. When you look at the elements of Engineer Battle Analysis, EBA, it's like OCOKA. Engineer Battle Analysis as part of the IPB when we're doing mission analysis. Step four is understanding the key terrain and step five is the avenues of approach. When we go back and look at that mission, I just didn't know that that southern avenue existed and neither did many others out there who had previously OCed at NTC. The OPFOR had developed the pass since the time when some of the task force commanders had been there. There was somewhat of a reliance on old memory rather than completing a new, thorough assessment. I relied too heavily on those

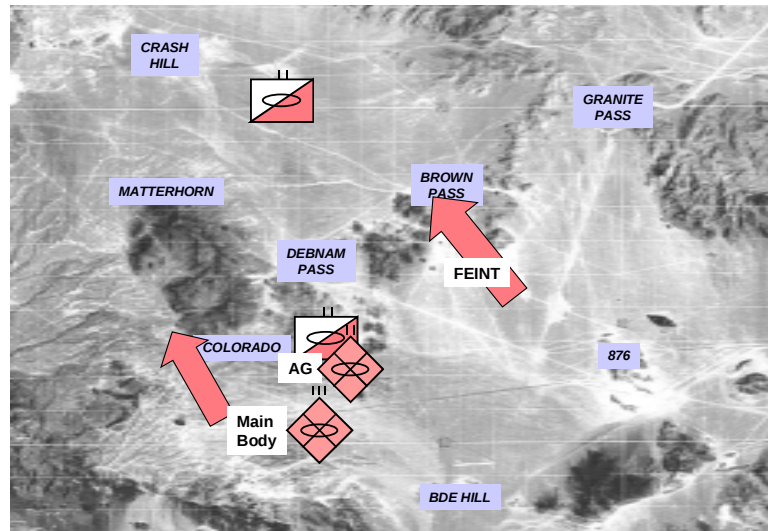


Figure 14. OPFOR Bypasses BCT Defense.

warriors, as it was my first rotation, to give me information. But, the onus of this analysis, the EBA, is purely on the engineers and our ability to see the whole thing and we failed to do that. As a result, we got our heads handed to us in that mission. We fought well, fire, maneuver, movement to contact, it was good. There were a lot of things learned. But, the enemy did not do what we wanted the enemy to do and that is not good when you're fighting a defense in sector.

I got to see the satellite imagery that showed the pass about 5 months later. That tool was not available during that rotation. It was very much available in my second rotation. That imagery has been improved, and you can see the lines where the battle positions are dug in. You have that capability. It makes you wonder what capabilities the new AWE Division, Force XXI, have... that they have real-time information on where the enemy, their FSE, advance guard, all the elements of the enemy are. And of the myriad of ways in which tactical formations are employed, if you could see them, there are only X number of decisions. When you are executing missions on decision point graphics, then you learn to fight the same way.

38. Accelerated Decision Making Process

In my first rotation, the brigade commander adhered to the strict military decision making process. Complete. There were times he would accelerate course of action development because of his experience and understanding the terrain. He would have a focused course of action and want us to refine that. So, the course of action development stage was more a synchronization and refinement of an established course of action. For the most part, he adhered to DDMP.

During my second rotation, the brigade commander, using what we call the accelerated decision making process, was able to assist the brigade combat team in developing feasible, suitable, acceptable brigade level OPORDERS in 6 to 8 hours. Unheard of. And the anguish of developing this voluminous beast of a brigade OPORDER that is only good when you roll it up, go find somebody, and poke them in the eye with it, because that is all it's good for once you LD. All that pain kind of goes away under this newer way of doing business. It keeps the fundamentals of the old process but it streamlines it. There is opposition within the Army from some extremely important and respected warfighters that the accelerated way may not be the way to go. But I will tell you from being a guy who has to execute it and do it and be a part of his brigade combat team planning staff as well as an executor... it's the only way to go. As a result, it's the only way in which you can meet the 1/3-2/3 rule and nobody meets the 1/3-2/3 rule. I think the leadership that continues to promote the deliberate decision making process forgets the fact that it precludes anybody from meeting that rule and allowing the task force commander the time he needs to actually get on the ground. I will tell you that if you are not conducting rehearsals, you're not going to win the fight. You have to give the task force commander the time to produce his OPORDER, get his plan and intent done, and then get on the ground and do his rehearsal. We're not doing that and that is why battles are lost. But if you follow this accelerated decision making process, you have the ability to actually, possibly reach that 1/3-2/3 and give the task force commander what he needs to execute.

I also firmly believe that a brigade combat team commander should have enough experience and expertise to not hokey around with "give me three courses of action and let me decide..." That's terrible. Looking at the three brigade combat team commanders they have in the 1CD, none of them do that. These guys are experienced, they know how to fight, they can look at terrain. Mission analysis is such a critical point

under this system because that's what gives that brigade combat team commander a look at the enemy, his own friendly capabilities, his flank, his adjacent friendly forces. It gives him a look at the ground that he needs to have so he can know the enemy, know himself, and know the terrain, so he can establish a course of action, and that the course of action development should not be a course of action development. It should be a refinement for synchronization of the fundamental course of action that the brigade commander wants to fight. And let them wargame it. Wargaming is great. We're all over that wargame. It's critical. That is where we really get a timeline. We look at the attrition rates and the feasibility - the feasibility - of the course of action.

When we get done, we have a synch matrix that's pretty darn good

“...a brigade combat team commander should have enough experience and expertise to not hokey around with ‘give me three courses of action and let me decide...”

and we could actually issue it just based on that without any further refinement. Boom. Give it to the task force and they could do with that enough, in a very short period of time, to probably execute a successful mission. This brigade commander is on to something here that has really taken away a lot of pain in the staff officer's life and it has been able to successfully provide the task force commander the time he needs. That is really one of the big developments I've seen: streamlining some of that agonizing planning process that some of the senior leadership has said, for some reason, everybody has to go through. I think there's a lot left to be done on this.

39. Engineers at the Point of Attack

The enemy had a movement to contact. But then they transitioned into hasty defense. I will tell you they had already pre-dug a tremendous amount of fighting positions. They were almost on the verge of a deliberate defense. We were moving from west to east. Our LD was on the rear slope of Brown Pass, coming through the passes. We were able to get through the passes reasonably well. They did FASCAM one or two of them, but we had a pretty good rehearsal and contingency plans for using the other passes. We probably did not execute movement through the passes with the deliberateness that we should have; knowing full well that the enemy uses that as a

fundamental separator of our forces so they can separate us and attrit our forces through various means, CAS, artillery, chem.

We had wanted to go up and attack that north flank, but we were being attrited so bad we weren't making progress. During this attack, the engineers actually lost situational awareness of where they were on the battlefield and I was right there with them tracking that lead engineer company. I lost situational awareness of where the company teams were because the task force commander lost situational awareness of where his company teams were. We don't have that FBCB2 terminal inside the vehicle. We have EPLRS, but that only tells some FBCB2 terminal box that's sitting in the rear where somebody in the TOC can see us all. Nobody was reading that, and we don't have dedicated FBCB2 terminal operators since the MTOE doesn't support it. Nobody could tell me, "Hey, engineers, you are the point of attack." I realized I was lead once I was sitting down there. I didn't see anybody else. I didn't know what was happening. And I said, "Hey, we really are alone here." And I was the one who pushed them in there. We knew that we were too far forward when we actually crossed the line between Hill 876, Division Hill, and Hill 800. At that point we knew we were pretty much alone. At that point your options are to turn around or to go for the only relief element that I knew was on the ground. So, that's what we did.

So, all of sudden, when we were able to assess where the heck it is, I'm talking to the brigade commander telling him I'm sitting up here in the Racetrack, 300 meters off the front line. We're not taking fire. We're counting antennas, calling in artillery fire on these individual fighting positions, I'm asking where they are? The brigade commander had to regroup and get an assessment of where the TOC thought everybody was. And then, all of a sudden, they found out, heaven forbid, the engineers were sitting up there without maneuver forces. I had four tanks with us as part of the breach force, but that was it. They were cautiously moving forward to the point of attack. I was moving forward ahead of the brigade commander. He had pulled up somewhere around Hill 800 and was sitting there. I normally move one to two terrain features, IV lines, ahead of him. It's standard, I try to be his eyes. He'll pull me back a lot because I move kind of aggressively. Although in the last couple of battles I stayed with him and we hunkered down. I was able to sit there and had situational awareness as part of the TAC. On movement to contact I don't like to sit too much.

We were able to get the majority of forces through the passes. What we found out though, in this movement to contact was that the safest place in the Central Corridor was right down the middle. Everybody hugs the sides. Well, guess what? If you hug the sides, you're certainly within the range fans of all their weapons systems. But what we found out was, if you go right down the middle of the Central Corridor, the

"...if you go right down the middle of the Central Corridor, the enemy on both sides, north and south walls, does not have the range to hit the center..."

enemy on both sides, north and south walls, does not have the range to hit the center and the dead space for the enemy is down the center of the box.

In the middle of battle we figure it out. We're attacking down the middle. And all the friendly maneuver forces are taking tremendous attrition on the flanks. But the forces that went right down the middle, to include our engineers, received no attrition. The enemy couldn't hit them. All of a sudden we, the engineers, are hunkered down 300 meters off their front wire. And we're looking at their dug-in tanks on the other side, counting their antennas in the holes, and calling in coordinates for fire missions. The engineers are already there, at the wire, and we're waiting on maneuver forces to catch up to us because they were fighting off the walls. The CSOP were along the wall. Instead of fixing the CSOPs and bringing artillery in to eliminate and bypass them, we elected to fight, and of course, we're taking attrition from each CSOP.

Now the AT-5s that were in that front line, on that first echelon defense up there, were in the far corners and they couldn't range us either. We were hunkered down low, and we were way down in. We were able to actually dismount Sappers and move forward to cut the wire. We dismounted right in their face. But their tanks could not come up because we had a platoon of tanks assigned to us and we had M1s sitting up there. The T72s were sitting down about a click and a quarter away from us. They were looking at us and we're looking at them and they are not going to get out of their hole to come get us because there's an M1 looking at them. They have artillery raining in on them.

The bottom line is we were able to sneak up, cut the wire, and then finally, the task force is able to cut free a maneuver company team who comes running up the Central Corridor, right down the middle. And he can't be engaged. Upon his arrival we launched an attack almost where

everybody says you shouldn't go, that's right into the center of their defense. And frankly, their overlapping fires were not sufficient in the center, as opposed to their flanks, because stereotyped BLUEFOR always opts to attack a flank. As a result, we were able to penetrate the obstacle and pass 14 combat systems through before they were able to reseed with their FASCAM, which is standard. We held another platoon of engineers in reserve. We laid in another point of breach and passed follow-on forces through that. At the point that they called end of mission, we had almost equal combat power and we were moving forward which gave us the advantage.

I guess we were lucky because we got there without being destroyed. On the other hand, we had not done an analysis of where the enemy can actually range you with their weapons systems from the wall. If there is no enemy sitting on the floor of the Central Corridor, then he has a hard time ranging that center. So there are some advantages. He typically will put a majority of his weapons systems up there in the center to cover down once you try to penetrate. But then you find out he really doesn't do that. He really pushes his assets to the flanks because he knows you'll penetrate there. He also believes he can maneuver into the center easier than he can maneuver to either far flank. We still maintained enough combat power in the task force to get a company team to respond. We didn't ever have to set a support by fire position for the supporting force. We never actually developed sufficient smoke to provide the obscuration necessary, but we were able to suppress the enemy through indirect fires enough that we were able to actually penetrate. We did get smokers up there and they assisted somewhat.

Another advantage we had that prevented the enemy from repositioning, because they should have repositioned and they weren't able to reposition, was that the other task force went all the way down past Brigade Hill, past Bicycle Lake, came through the Valley of Death, all the way around and enveloped up through Siberia. Their firing position was bringing fires down to the east of Hill 760. So, we had main attack and supporting attack go all the way around. The enemy did not know the size of that force and did not put anybody down in the Valley of Death. They could have easily shored that up had they been there but they didn't think we were bold enough to do that. The brigade commander was able to send the mech infantry task force around that way to fix the enemy and prevent him from repositioning. We executed the breach within 8 minutes. So, that was pretty quick. It was done with dismounted Sappers as opposed to

firing MICLICs. We were saving the MICLICs for the FASCAM we knew would come in on us.

40. Integrated Countermobility Destroys Enemy

We went to a defense in sector and we won that. We destroyed the enemy and we pinned them up against the North Wall. At change of mission we were calling CAS in on them and they were hemmed up against the wall unable to move. We had 2,200 meters of Volcano. We had 4,000 meters of linear minefields with the first row dug in. We had MOPMS to close lanes. We had supplementary minefields back behind 910 so the enemy could not come down the Central Corridor and go around 910 and *then* get down into the Colorado wadi. So, we knew about the southern avenue but we decided we could fight them out front and by positioning company teams where they had long shots. And the enemy saw all that engineer activity and the dug-in mines, the first row dug in. They had no capability of breaching that with any speed and as a result, they elected to go north.

What they didn't know is when they elected to go north, we had minefields laid in the central part of the reverse slope of Brown Pass. We had ditches at Debnam so they had to go through Brown Pass. There were two company teams coming off of Alpine Pass waiting to assist once we knew what the enemy's plan would be. As a result, the enemy did exactly what I watched them do the year before. They came through the Goat Trail. They went to the North Wall. They consolidated forces, and they started to prod the North Wall.

What they didn't know is we had put a Volcano minefield off of the North Wall, and we put a minefield in the middle so to them it looked like it was about 3,000 meters of obstacle there. What we failed to do, as engineers, is fully tie in that Volcano all the way up the slope so the enemy was able to actually get on the North Wall and bypass it, but they had to bypass it by single vehicles. What happened was they found that little bypass because they saw we didn't tie it in. Which we didn't. We didn't do it intentionally. We just didn't do a good job because we couldn't get the truck up there. We should have blown a MOPMS right there and tied it in. That would have ended it. But the enemy finds a single lane and they put everything they had into going around that thing. And when they did that they stopped their forward movement,

trying to get that bypass, and we were able to attrit them. Then they got to the far side and started to mass but we had already repositioned and were sitting there attriting them with the indirect and calling in CAS. We had superior numbers and they were about to be destroyed but the COG called change of mission at that point. I feel like we really succeeded in destroying the enemy in that battle.

Lessons learned were that the brigade commander had a solid course of action and early on was able to allow us to develop and synchronize that course of action early. He gave us ample time. I had 18 S&P trailers of class IV and V moving with us out of the movement to contact because the FSB and MSB commanders were intent on pumping that stuff forward. We put in, in that first defense in sector, about 5600 mines and that was light. That was an underachievement of our goal. We ultimately reached our goal in the last battle of the campaign. We got three of the four Volcanoes on the ground. The enemy committed to a course of action where we really wanted the enemy to go to, which is almost 100% opposite of what happened during the previous year.

The maneuver did a great job in destroying Task Force Angel. They tried and totally destroyed them. So the enemy didn't get those eyes in to be disruptive. The counter-recon effort was outstanding and did a great job destroying the enemy's ability to have eyes. I'm sure you've heard that a million times from a million maneuver guys. If you win that counter-recon fight and you take away the OPFOR's ability to see, he's just as blind as you are. That really helps to equalize the odds in

"I'm sure you've heard that a million times from a million maneuver guys. If you win that counter-recon fight and you take away the OPFOR's ability to see, he's just as blind as you are."

this environment. You get better effects. We had great effects. We actually killed more combat systems by mine kills than we did with the field artillery. We actually killed more weapon systems with mine kills than we did with the TOWs.

41. Hell Bent on Breaching

A movement to contact. The enemy goes into a hasty defense and the movement to contact transitions into a hasty attack. That's where we got up there in the Racetrack, penetrated, and were able to pass about 14 combat systems through that first breach and then through the second breach we were able to pass the rest. The task force got up and our BSA set up around Division Hill and the TOC was at Big Sandy. Enemy defense of the Whale Gap, the Furlong. Let's just put this brigade team through a 200 sieve. As a result, this fight is always ugly when you get to play this one.

Two years ago we fought it in reverse, we came out through the Southern Corridor from the west and we attacked from the south. Of course the enemy fights this with their CSOPs real tough, and allows you to get right in there and brings all hell on you, from NBC to every weapon system known to man. He puts in his first defense and then he puts in a back up defense that no one has ever lived long enough to see beyond.

In 1996 we attacked with the main effort going right through their Southern Corridor west to east and had great difficulty with the CSOPs and we got a recock on this mission. At the same time, a task force went through the Valley of Death. Needless to say we didn't do real well in there and got chewed up right in the gap. Actually got pretty well

“...the report was it was triple stranded wire with three rows of mines. The reality was it was a single strand of wire with one row of mines...”

attrited before much really got through the Valley of Death. We recocked. The enemy can't change their scheme and we are allowed to go back and rethink our plan of attack. If we want to change it we can for the training value. So, we thought through it this time and they wanted to do the same thing only they wanted

us to be more deliberate, aggressive, the whole BCT. We were somewhat too cautious. Maybe our tactical patience was too much. At the same time they wanted us to have tactical patience once you identified the enemy, to work yourself into a position to kill him. One battalion commander was very successful coming through the Valley of Death and was able to penetrate the enemy. The other was pretty successful in eliminating CSOPs.

The problem was I had generated too much energy in my engineers and they were hell bent on breaching. They didn't give a damn what it was, they were going to breach. We emerged down at the Whale Gap, and lo and behold there was a single strand of wire and one row of mines sitting there. It ended about 70 meters to the left of where they went in. We could of drove right around. About the time I get up on the hill and see all this, we're already committed to breaching operations. So, the report was it was triple stranded wire with three rows of mines. The reality was it was a single strand of wire with one row of mines and it ended 70 meters to the left. The moral of the story is, battalion commander, get your butt up to the high ground and start picking that point and looking at the ground so that you can assist the maneuver task force commander with picking the optimal point of penetration. Get your butt at the high ground and help him. Big lesson learned for me and my company commander engineer is make sure the reports you're getting are accurate reports. Get up there and look yourself, and confirm that what's being reported to you is true. Because you know the difference between a triple strand and single strand of wire, three rows versus one row. And then look left, look right, and find the bypass. We were hell bent on breaching that day. And sure enough we launched MICLICs, we cut wire, and we stagnated for about twenty minutes doing all this hocus stuff when in two minutes we could have driven right around it.

Lesson learned is find a bypass. Always find the bypass, because the enemy can't possibly, and they don't have the assets, to put the obstacle across the whole thing. The other aspect was that once we get through there, we have to have enough combat power to move forward, because the enemy starts laying in FASCAM. And all of sudden you look around and the only people standing there are the engineers and one or two tanks you were able to penetrate. The reality is you have to have the combat power available to assault, and they have to be moved up aggressively to penetrate. Once that breach is in, they must assault immediately to get beyond that very narrow killing point because it *will*

be reseeded, it *will* receive chemical, it *will* be closed up. That's why on that movement to contact, the enemy's hasty defense, and our transition to a hasty attack, we were so successful. In eight minutes we were passing combat systems. By the time we got the lane in and proofed real quick, we had four Bradleys just standing there frothing at the bit. I was surprised we didn't catch an artillery attack and get us all. That is so good to see.

I think it should be mandatory that the breach force commander be the company engineer. The maneuver task force commander cannot afford to take a maneuver company commander and make him a breach force commander. All the failed missions that I've ever been on in a breach, it was a maneuver company commander in charge of the breach force. All the successful ones that we've had, there's always been an engineer company commander in charge augmented with a tank platoon for local security. That tank platoon ends up being the big killer because they seem to live. They maneuver to live, and then once the breach is through, they are able to penetrate to the far shore and they start cleaning up as the assault force passes through. It allows a fifth command and control element to a task force commander so that his four company commanders can maneuver and fight and kill, not be concerned with the TTP of working through a breach.

That's what an engineer commander does. He lives for it. There's no tank commander in the world that loves to breach. It's just like, "Nuts," they hate it. All they want is the engineer to get it over with so they can attack. They can adhere to that and they can practice it at home station and they can have the assigned tanks that are going to be part of the breach force. And, those tanks know they like being with the engineers, we take great care of them because we're not used to having them, and we baby them. And they also know they get the greatest amount of kills because they seem to live and they seem to get into the fight. It facilitates the commander's execution of the mission.

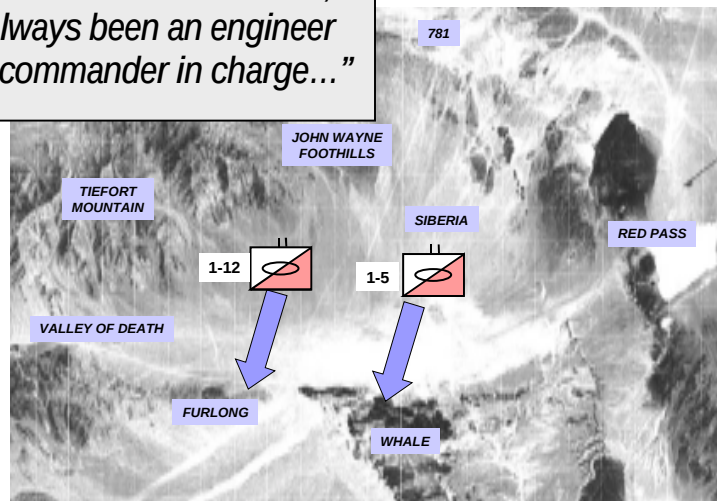
So, we got the recock. We breached that single strand. We went through. Boom. We get destroyed on the far side because it took too long and we weren't using our brain. At the same time the mech task force is emerging out. And when they called end of mission we were progressing on but our combat power was very weak.

42. Up the Furlong

Here in 97, we were coming down through Siberia. What a great opportunity we had there. We were able to actually put the engineer TAC up forward and put eyes on, from the high ground at 781. With

“All the failed missions that I've ever been on in a breach, it was a maneuver company commander in charge of the breach force. All the successful ones that we've had, there's always been an engineer company commander in charge...”

high-powered binoculars we were able to look and actually watch the enemy engineers putting in the obstacles. Even before the COLTs were supposed to get out, we positioned the engineer TAC



forward to give real time information. And then at the recommendation of the S3 of the engineer brigade and the TAC, we put COLT teams up to reposition with the TAC and they were able to bring their high-power binoculars forward. As a result, we were able to TRP each one of the battle positions they put on the reverse side which assisted us greatly so we were able to position where their CSOP was on the north side of the Whale. We were unable and unsuccessful at seeing the CSOP that they placed in the John Wayne Foothills but were able to destroy them in the movement. We attacked with two task forces abreast. Task Force 1-12, main effort, on the west side of the Siberia and Task Force 1-5 on the east side. 1-5, the supporting effort, was to gain the Whale. 1-12 was to penetrate the gap or if necessary go over the Furlong.

The enemy reported later that they FASCAMED the gap, so we did not fare well at the Whale with 1-5. We lost a lot of assets there. We were able to recover those assets there and transfer them over to 1-12.

Figure 15. Attacking Furlong Ridge and the Whale.

So, we fought the Furlong. The Furlong became an assault breach. Dismounted infantry were on the reverse side. Mortars on top of the hill. It was ugly. It was a dismounted draw fight. We actually penetrated their defense and got two tanks to the back side of their first line of defense. They committed the CAR. The CAR was able to destroy those and they fought us back and killed our systems, pushed us back up on top of the Furlong. We fought our way back down. They pushed us back up. We pretty much had a stalemate but we had more combat power than they did, still ready to project.

We got a recock and fought it again. We shifted assets. It was almost a repeat, almost identical. It became a cat fight, a pull fight, an assault fight. Dismounted engineers, dismounted infantry, fighting, hand-to-hand combat right up on the Furlong. The lesson to think about here is, how do you maintain passage? We couldn't decipher which lanes were open. One lane would be open. We would mark it with cones. Boom, it would die. Then all of a sudden we'd get a tank blown up in the middle of it. We were able to penetrate on the far side. They beat us back again and pretty much a stalemate there again. If I had to do it over again, I'd pull my MICLICs up there and shoot those rabbit killers right over the top of the Furlong and fry all that dismounted infantry. That would have been a way to clear those guys out of there. We were able to go around the tip of the Furlong and get some penetration through there, but they had a tremendous amount of firepower, just TRPs massed. We had extremely effective smoke during the first fight. That's why we actually did penetrate the MRB back by their CAR.

Communication and battlefield awareness was horrible. We'd get a lane open. Boom. Not. Lane's closed. If you've been on the Furlong, you know there are a series of paths going up. You go up one, get a lane up, and then they blow a tank. And at the base they're trying to direct which lane to go up. "Nope, don't go up that one, go up that one. Not up that one, go up this one." And which one do you go up? And the answer is, you really can't get up there. I don't know if there's any way to win that. Chaos reigns supreme when you're in the open and there's no longer ammo, and affix bayonets because we're going after them. It really changed the perspective with regard to how you fight. It had been a long since anybody'd had the bayonet fight on the Furlong. Most people forgot that there was such a fight.

LIEUTENANT COLONEL DYFIERD HARRIS, 1999

43. Launch Me Early

Defense mission. Once we did the China Lake mission, we were pushed against a pretty tight schedule. We flew the China Lake mission early morning, like three o'clock, recovered the aircraft, put them to bed, then that afternoon we relocated out to the first field site, East Gate. What I allowed to happen was - I guess it's that *visualize yourself* piece. The jump completely derailed our mission for the next day. I never caught that it was doing that. I heard concerns from subordinate commanders. "Sir, you're asking us to do too much." But, when you've done something already yourself, you know you have done it, so you think they can. I had conducted jumps before. I told them to relax, it was just a jump and then you're going to go. I thought they could handle it. When we made the jump, we actually ended up getting there at night and the next morning the mission was at 0530. So, while we had done a pretty good job of planning the mission and rehearsal, what we failed to rehearse was the preparation.

We got up the next morning. Blackhawks had no fuel. My FARP platoon had apparently floundered in the night, and because it got dark, did not get all the Apaches refueled which wasn't an issue because the lead company had fuel. It was the other ones behind him who needed fuel, so I had to try to turn. But it all started from the jump. It really taught me that lesson that the preparation planning is just as critical. I was so concerned about planning the mission that I didn't plan the preparation. When we made the jump, the fuelers closed in with all the gullies and washes on the desert floor. They tried to cold refuel the aircraft that night but they couldn't get to the aircraft to cold refuel them. So it completely derailed them. You would think it was routine, something we did everyday. But the desert put an extra challenge in there that no one was prepared to handle. In daylight it was no problem because there are plenty of roads. Now you're talking about a guy out there with goggles and a guy trying to do light discipline. Once it got dark, it was painful. The HHC commander finally, about three o'clock in the morning, apparently stopped them. I was down for the night. He said "I'm not going to get anybody killed. The boss is just going to have to chew me out in the morning." Which I applaud. I just wish they'd

woken me up to tell me that. That would have been nice. But that was a derailment of preparation.

Then when we actually got launched for the mission, I had a challenge to prevent my people from becoming too focused on *that* setback. The next morning we are ready to launch. The entire discussion was, “We don’t have fuel, we don’t have fuel.” When in reality, the only critical fuel bird out there was the Blackhawk that was supposed to fly the brigade commander. But every commander I had could not get over the fact that his aircraft had not been topped off. We had done mission analysis and it was a 15-minute flight, probably 20 minutes in the BP, and a 15 minute flight back. That’s barely an hour and you’ve got two hours worth of gas on board without even getting topped off. You only flew 10 minutes yesterday. I had to get them to forget about the fuel and go execute the mission. Go.

That was leading up to the first fight. The mission was we were going to destroy the forward security element of the advance guard. The CAV was going to make contact and then we were going to come in on the flanks and try to destroy him. There’s a saying in the attack helicopter business, “Launch me early rather than launch me late.” I am a flexible enough asset on the battlefield. I can flex to change even if I’m going in the wrong direction. It’s better to be going in the wrong direction early than the right direction late.

“Launch me early rather than launch me late... It’s better to be going in the wrong direction early than the right direction late.”

Some of this problem was higher, some was my problem. We became so engrossed with JSTARS and UAV that we forgot some fundamentals of being an attack helicopter pilot. First, the CAV had eyes on the

target already. I don’t need JSTARS to confirm what I already know is out there. Also, there was a phase line at Nelson Lake and between Nelson Lake and the next phase line they would not allow JSTARS or UAV to feed you any information. Well, if you knew the attack was coming and they hit that first phase line, in my mind, that is when I launch. Because I don’t want to be in the ABF, waiting on him, when they come into the engagement area. They’re going to kill someone.

For some reason the battle captain at brigade was holding us and he was trying to get a better read. It’s that perfect intel thing those guys look for. It’s funny how we learn these lessons over and over

again. There's no such thing as perfect intel. You don't need to wait for perfect intel. I got a read. I got this much dust moving. Launch me. Launch me, let me do a movement to contact. Let me get into position and I'll develop the situation. Well, we launched when they got a good read at the next phase line. But by that time the FSE is already in contact with the CAV. The whole plan is shot. They've already pushed east all the way over to Brigade Hill. So the whole plan of bloodying his nose as far back as possible with Apache helicopters is derailed because you're waiting on the perfect intel.

So, those events really stuck out in my mind. One is I allowed my entire mission to be derailed because I didn't think of the move and the mission the next day. It was a routine jump in my mind. Well, it may have been for me but it wasn't for a lot of the guys out there. Second, once you get all this worked through and it's time to go. I had to get them over, "We don't have fuel." We were wasting time because everybody was talking about fuel. So I finally get on the radio and asked, "Well, how much fuel you got?" "Well, I got 2000 pounds." "So, why am I having this discussion. That's plenty of fuel for the mission."

Yeah, you can't park on a cloud. You run out of fuel it's a bad thing. So, when an aviator gets in the aircraft they're always looking to see if that gauge is full. But there is such a thing as mission analysis. Even for routine flights, mission analysis dictates how much fuel is needed to do this mission. Well, they had done it. They knew how much fuel they needed. They only needed around 1400 pounds and they have 2000 pounds. They became fixated on this one issue. That probably delayed us another 15 minutes.

Then when I'm finally ready to go, and I'm already thinking I'm behind the power curve, I get told, "Hold." No, I don't want to hold. You've already told me he crossed the phase line. We all look for the perfect solution on occasion. The battle captain - and he was an aviator - had so much information. This is one of my long-term fears, especially with Force XXI. So much information is available, I think people are going to delay decisions based on trying to get a perfect read, and I don't think it is ever going to happen regardless of the technology. Your situational awareness will be improved but it won't ever be perfect. At some point it has to go back to experience of the commander's gut that says, "I need to do this now. I have a 70% solution, I need to do it now." I think we were looking for the 80-90% solution and it never happened.

So, bam, the CAV gets hit. Now, my guys launch. We go to the ABF and of course we start hitting the lead battalion, the security of the main battalion. The flank security guys actually get around, because once they go through the ABF, they go behind. Of course, battle of the day went to the Krasnovians.

They had to uncurl out there off of Bicycle Lake. Part of the concept of fighting throughout the depth of his formation is what we were trying

"If I get the Apaches out in front of everybody else, with the Kiowas having eyes on the target, as soon as he comes across the first phase line, smack, you bloody his nose."

to get to. The concept was, which I fully agreed with and still agree with today and want to try again, is, if I get the Apaches out in front of everybody else, with the Kiowas having eyes on the

target, as soon as he comes across the first phase line, smack, you bloody his nose. It's an old street fighting method, you get the first blow in. Now *his* entire plan, *his* timing is off, he's desynched because he was expecting to gain ground before he makes contact. Bam. As soon as you roll across you get Hellfire, you get artillery, you get MLRS all falling on top of you. You're completely slowed down. Then it's a footrace.

The ground maneuver plan was literally a footrace for the CAV. The CAV was trying to beat them... The battle out there normally takes place right in front of Tiefert, it's Brigade Hill. We were trying to beat his forces over the road, fight them on terrain they don't normally fight on, so we could push out and get at Brown/Debnam Pass. We wanted to control it. The Apaches could delay them long enough for us to get to there with the ground cavalry. That was our mission, a delay mission. But if I'm going to delay, I've got to be ready. We were late. Some of that was on me. I think we could have stemmed that if we had launched sooner. I enjoyed it. There were a lot of lessons learned.

The other thing that becomes a challenge for us is now, with Army aviation, once you get out there, we don't have the radios to do battlefield reporting. I don't know if we'll ever spend the money or we'll ever get over-terrain radar for the distances we travel. NTC is just a function of relief. When I was in Germany, we were going 100K deep. Well, if you're a brigade commander, you just sit back and *wait* because there is no way I am going to talk to you. I don't have anything on

board that's going to allow me to talk that distance to you. We saw the same thing at the NTC. My guys would be in the ABF engaging targets. And you have the brigade S3, the brigade commander, my S3 and me. We're all screaming for tactical information reports.

I finally figured out that the best thing I could do, because it really was a company fight, was try to bounce back and forth and find pieces of terrain where I can relay that message back. It's very important for the brigade to have the situational awareness of what's happening. But if I have a captain who's actually trying to kill targets, and all he's worrying about is whether he can report back, at some point, he's not killing targets anymore. Where is the trade-off? That's still a tough question. There is a balance there that has to be achieved.

What I normally told the company commanders was to look at the CCIR and if you *knew* it was a CCIR and saw that piece of information, then you were obligated to stop. At least you should pull back and give that information back because there would not be a CCIR out there if it wasn't that important. Beyond that, fight. That's what you're out there for, to kill tanks. And if you're killing tanks, kill them. Then tell me about it when you get a chance. That wasn't always a popular decision, but I'm still convinced, if I have a company out there and he's killing tanks, he's going to do us a lot more good if he kills tanks than if he's reporting back to me. That was the first day in the box. Day one. First mission. Oh yeah, it started off great.

"...if I have a company out there and he's killing tanks, he's going to do us a lot more good if he kills tanks than if he's reporting back to me."

44. Aviation Company Lessons, Developing Engagement Area

Actually, once you got past the initial maintenance problems, it went pretty well. There are all sorts of company lessons you learn throughout. Guys staying in the ABF too long, just not moving, and allowing the ADA piece to maneuver around behind you. You shoot once or twice out of an ABF, it's probably time to move. You get up in Alpha-Bravo Passes and you're in the shadows, and you're killing all this stuff.

Looks pretty good, you don't want to move. While they're sitting there, they don't know there's an ADA piece that's closing on them.

Another good lesson deals with frontal shots. With the Cobra it was a real issue because that was the hardest part of the tank and the TOW obviously threw basically a straight projectile. The Hellfire comes down more on top of the vehicle, which isn't as big of an issue. However, what my guys failed to realize is, and sometimes they continue to fail to realize is, when you start engaging a guy nose to nose, the entire time he is closing on you. So, if you have this formation and you take out some front targets. Well, you create smoke and the other targets will start to come closer and closer to you until you are forced out of your ABF and can't get any other shots. Or, you're killing targets and now all of a sudden one guy happens to get you inside his main gun range. And that sabot moves a little faster than that Hellfire. Then you lose. You can't teach that sometimes unless they see it. It's proper selection of an ABF. Staff gives them a plan. We select an ABF. And I tell all my commanders that when you get out there, the ABF is a tactical firing position, it doesn't lock you in to any type of terrain, it's a direction that orients you for the attack. But if it doesn't work, move, and tell somebody where you moved to. Find a better spot to accomplish the mission. They need to bring that initiative and flexibility to the battlefield.

Another big point that was discussed was engagement area development at the company level. I saw this for the first time very clearly at the live Hellfire shoot. It's funny because we talk it all the time and I can tell you until we did that live fire exercise, I would have told you engagement area development by the companies was pretty good. This was in the central valley in front of Nelson Lake. The ABF was out around Chinaman's Hat. They had paper targets out there, et cetera.

It was very simple stuff. We had been training to the company level. Now I'm trying to integrate a battalion in the air. The first mistake I made is there should have been a battalion level engagement area rather than the companies'. We thought we had done that and we basically gave this company this EA and another company the other EA. Something we didn't take into consideration was predominant winds. When this one company starts killing one EA, then you had another company at this EA. Wind is blowing across his targets and his targets become obscured.

We missed a lot of missile shots. Hellfire uses the laser. A couple of guys use the laser tracking mechanisms. It's a little box that comes

around and holds the laser spot there. That's fine as long as the aircraft can pick up the heat and know that it's there. So, the missile is in the air. Everything is looking beautiful. About three seconds before it goes, smoke comes across the target from the other engagement area, causes the laser to go off. Laser goes away and the missile goes off target. I really felt that was my fault. That was a staff failure where we gave them two very close targets. Some of it was the limitation of NTC. The engagement area development plan was done independently for two companies, fire distribution, what they were going to do. One company planned to work east/west and the other planned to work west/east. So, they were both basically were starting in the center and working out. Well, winds were going west/east. As soon as the guys in the west start killing their targets, all the east targets become obscured. He's got lasers breaking and he's got missiles going. That was the last live fire exercise.



We needed to work on fire distribution. We also needed to work on an *alternate* fire distribution plan. So, when you got in, the target you thought you were going to see didn't present itself. The company commanders quickly, among themselves, changed that. Now the Apache has the laser spot tracker. You can shoot a laser out and hit a button and it will go where this other guy is shooting his laser. Then he'll say that, from that spot on the ground, you take everything north of this and I'll take everything south of this. The laser is spot checking. That's just a quick method of doing it. What happened though is when he shot it out, one of the company commanders couldn't pick up the spot and it wasn't working correctly. So, now we're flailing because technology has let us down. Technology let them down. They're worrying how to break up the area without it. But if you looked exactly

behind where they said they were going to shoot that spot, there was a ridge line. Right there. All you'd do is say you take everything from the end of the ridge line. The ridge line was out of the engagement area but you still could have used it as a reference. Hey, a piece of terrain. It used to work in the old days. It works pretty well. I think the whiz kids that we grow become so engrossed in the technology and they understand it

"...the whiz kids that we grow become so engrossed in the technology..."

so well that when it goes away... "Well, how do we break up the engagement area now?" Break out your map and do it the way we used to. It works.

45. Nothing in the North

This was a split attack. It was pretty successful except that there was confusion as to who was responsible for the Northern Corridor. In this fight we finally get 1-67 Armor into the battle. They come in that night. Now we have an armor battalion. We have the CAV out front that has been screening. You have me in the back. The next morning the CAV is getting probed the whole time and now they're going to have an attack. My mission was the division CAR and regimental CAR, combined arms reserve. We knew they would come either out of the Colorado Wadi down there or they expected them possibly to come through the North.

The Canadians had the southern portion. They were pretty incredible by the way. It's the only time I saw someone get that deep into the NTC rear and not be detected. He had great intel but he couldn't talk. That's the problem, the radios again. They were watching the Southern Corridor. If anything came through there, that was my primary responsibility. I was going to destroy that. 1-67 was basically back in the East Gate area with the ability to swing north if something came north or the ability to go through the Central Corridor. The CAV had a strongpoint basically in this Central Corridor. He was set up in the Central Corridor. But I thought he had also put in an economy of force, a troop, up north to cover that or his Kiowas were going to cover that. Well, I don't know how it got missed, but no one was up north. Obviously, when the enemy came through, they started the attack. The Krasnovians had great reconnaissance. They quickly figured out, strong

in the center, economy of force in the south, and they're not sure what we have in the north, there's no real economy of anything.

Nothing in the north. If we would have been committed to the north, it would have been fine. Contact is made, pick up the division CAR, they're coming out of the Colorado Wadi like we thought. I take a company up there and decimate him. Understand, I had a lot of MILES maintenance problems. I may have six aircraft and half that can shoot, maybe two. They were still stopping this guy. While they're stopping the division CAR, the regimental CAR is running through the Northern Corridor unchecked. Everyone came down the center except for the division CAR. We basically stopped the division CAR. The CAV is getting hit by almost everything. Looks like everything is coming to center. We commit part of the armor battalion to the Central Corridor. This is where the attack is coming. We rotate one company off and bring the other company back up in. Because we also had these KVTs, these 30 M1 tanks, that everybody is looking for out there. Heck, there are a lot of extra forces out there because we have so many attack helicopter assets. So, the pressure starts to come in the Central Corridor.

The two lead battalions basically fix the CAV and the armor battalion in the Central Corridor. Meanwhile, the entire regimental CAR in front of the follow-on battalion come behind them and up through Granite Pass. They come up through Granite Pass into the Northern Corridor. Sweep. They come around on the northern flank. Finally, we picked that up. My guys come up and we start. Here's the problem with attack helicopters a lot of times. We are very flexible but when you start to get into the "everything is falling apart, help me" mode, then it is all reactionary and there is not a lot of time for planning. This is something that I think my commanders have learned. That's going to happen and I think just by virtue of what we can bring it's going to happen. It happens to artillery, it's going to happen to attack helicopters.

What I tried to stop them from doing is if you get a report that a lead vehicle is somewhere and you know it's going to take you 20 minutes to get there, well then you don't want to go there. You have to pick your piece of terrain where you want to fight. I would have guys run into Alpha-Bravo Pass and lose a whole company. Well the enemy was already there. We

"You have to pick your piece of terrain where you want to fight. I would have guys run into Alpha-Bravo Pass and lose a whole company."

don't want you to go into the pass. You should have waited. Pick your terrain. You still look at a map. You still decide, they're moving this way. There's only so many ways they're going to come. They're going to come through those passes. So, pick an ABF that's going to allow you to kill them in the pass. Bottleneck them in the pass, bring artillery to effect, bring CAS to effect, and then you can start doing it. All that was coming on, but it wasn't synchronized.

What finally ended up happening is the enemy broke through the passes and now they're back in the rear area. My FARP had a fight to the last man. Literally, one of the 50 cal gunners in my shop, his 50 cal jammed. He was the last guy. They had bypassed him, and then they finally saw the FARP. I guess part of them broke off to hit the FARP. Well, the FARP had actually set up an L-shaped ambush, so when they came in it was a fight to the death. The kid on the 50 was just waxing people. His 50 jammed as the last guys were trying to do 3-second rushes on him and he tried to go for another weapon and the last guy came up and killed him. But there was one guy left.

The piece that broke down on us on that day, the brigade rehearsal. I'm still not sure why that got missed, why no one was up north. The other thing was we allowed the armor battalion to get fixed. Part of that lead MRB's mission was to tell who was up front. Once they made contact, they maintained contact, and then someone maneuvered behind. The enemy tried to maneuver through that Southern Corridor with the Division CAR. But my two companies did a pretty good job, so nothing came through the Southern Corridor. But, then I tried to flex to the north and we just didn't do it right.

The hardest part for me was where to be and when to be there. Command presence can be such a force multiplier, it's incredible. This day I decided I was going to go in a Blackhawk and in the south because

"Command presence can be such a force multiplier, it's incredible."

that's our primary mission. I'm going to put my S3 in the TAC and he is going to go on that ridge line between the Northern and

Central Corridor. So, now he is in a position to talk and control if we send someone to the mountain. Well, it would have worked until my S3 got killed by a chemical attack. As soon as I wrote my guys off from the Southern Corridor, and they swung to the north and we started losing people, the FARP started getting on the line. My Hawk runs out of gas because my FARP has been overrun and I see my guys just flying all

over the valley and I'm trying to get somebody on the radio. I finally get my captain and I say, "Tom, brief whatever assets are back here." Because, all they needed was someone to gather the four, five, six, however many helicopters they have left, mass them and go kill something. You got them all running around on their own. I'm sitting on the ground out of gas, my S3 was killed, so he can't talk to anybody. The TOC was overrun. So they're running out.

But the first few battles I didn't feel I was in the right place at the right time. I was struggling to figure out where I needed to be. Where did I want my S3? We were figuring some of that out. We had him at the brigade TOC one time, that didn't work out.

And, then not having a dedicated brigade headquarters took some adjusting too. My brigade headquarters is normally there, and interfaces and does a lot of coordination between the ground brigade and aviation forces. Now all of a sudden, my brigade headquarters *is* the ground brigade. So now when I'm up actually trying to get information, for the first time in my life I'm competing with two other battalion commanders. And, oh, by the way, the brigade is more comfortable with my capabilities, comfortable with what aviation does, than what the ground does. So, the ground guys are getting more focus, and I'm missing a lot of pieces. It was the first time an aviation brigade had ever been a BCT, which I think is a great thing. I think it should happen again. I don't think we quite had it figured out what we were expected to do. I think the OCs drove the aviation brigade to focus all their attention on conducting a breach, which in reality was never the CG's intent. His concept is that this is a strike force, an entry force. I think 4th Bde would make an effective strike force.

LIEUTENANT COLONEL ORLEY JOHNS, 1998

46. Quick Correction in the Bowl

This was our first NTC defense. Force on force. Task Force 1-9 was in the north and we were in the south. We were at the Hill 876 complex, Peanut, CHOD, just to the east of it, right on the tip. Southeast of the Cul-de-sac. The enemy tries to run the North Wall and come around. We're setting a defense. First of all, my staff and I had a little confusion understanding the commander's intent. Initially we thought our engagement area was going to be to the west of 876 complex. The brigade commander wanted us to set my 3-8 Task Force engagement area just to the west of the complex. So when we got out on the ground, we were running around and making things happen. Here's where we want to kill them, here's where I want to set forces. The engineer company commander says, "Sir, this doesn't make sense. You have an engagement area out there, you are arraying the forces here. We can't kill them out there the way these obstacles are set." I thought about it and I said, "You know you are exactly right."

So I talked to the brigade commander. He had come down for a back brief, and he said let's talk about what we want to do. He listens and says, "No, no, that was not my intention." And he says here's the way I want this set up. "I want some obstacles forward but I want your engagement area to be in the bowl just to the east of Hill 876." We had had a confirmation brief at brigade. But, when I was at the map at the brigade brief, I didn't say specifically where my engagement area is or point to where he wanted to kill them. So we did not initially have full understanding. With that later face to face, we got it. And we fixed it. Sometimes you have to catch yourself. The indication was there.

We do confirmation and back briefs in the battalion as well as the brigade. SOP. I will visit key units and try to get to more. We at least go around and check on preparations. From the brigade we had gotten into a battle rhythm, where we said at a certain time we are going to issue operations orders. For example, change of mission plus 1.5. So, one and a half hours after change of mission, whatever the mission was, we were going to a location and we know we're

getting an operations order from brigade. We go there and get the operations orders while the battalion TOC will already have been given a hard copy. They are already starting to do a mission analysis. By the time the S3 and I get back, the battle captain already has it set up to brief the mission analysis. They've got proposed, restated mission and talk about courses of action. They lay it all out. We go through the brief. I may or may not stay for the wargame. I come back and they tell me what they came up with. So, we got to a point where we have everything on a timeline.

During the NTC train-up, the brigade's intent was purposefully make the battle rhythm a lot quicker. More fast-paced than at NTC. We forced ourselves to get into a rhythm and to do simultaneous ops. At the same time we were executing an operation, we would be planning another one for the next day. We would do the rehearsals and go on. Here it was like a self-imposed brigade timeline. By the time we got to NTC, we had plenty of time to visit units, et cetera. It wasn't relaxed but less stressful than expected.

But, again for this defense, the engineer company commander recognized my error early on. He knew the position couldn't be correct. There must be something I'd missed in the intent. For a while there I kind of told him he didn't understand. But he said, "Sir, this does not make sense, its not doctrinally correct," and on and on. So, we finally got that worked out. But we ended up a little behind in the engineer effort because he had started digging based on my directions. We finally got the defense set. Of the initial effort, we had several blocking obstacles and several turning obstacles. To make a long story short, we were at about the 50% solution in terms of prepared positions for vehicles, tanks and Bradleys; and we were at about a 75-80% solution for obstacle effort, mines and wire. Not too terribly bad, but not what we wanted. What it caused me to do was more of a mobile defense based on how it was arrayed.

So, we're looking at a regiment coming in against the brigade. In my portion of the sector, brigade wanted to convey there was strength in the south, and they wanted to push them north into 1-9's main effort. I had a little narrower sector than he did, his was a little wider. He had five company teams and I had three. I had two tank and one Bradley. We set the defense. Pretty effective to start out with. They started to breach our main obstacle belt in the south where I had my Charlie company arrayed, who in fact was my main effort for the task force. They started to come in and they had some slight penetration to

the north in 1-9's sector. Then they breached the obstacle north that tied in with 876, CHOD, Peanut. They started to breach. But I had my forces arrayed in such a manner that they couldn't make it through. The synch piece of the indirect and direct fires at that point, along with the existing obstacles on the ground, stopped him.

I had that one company team destroy upwards of 34 to 40 vehicles

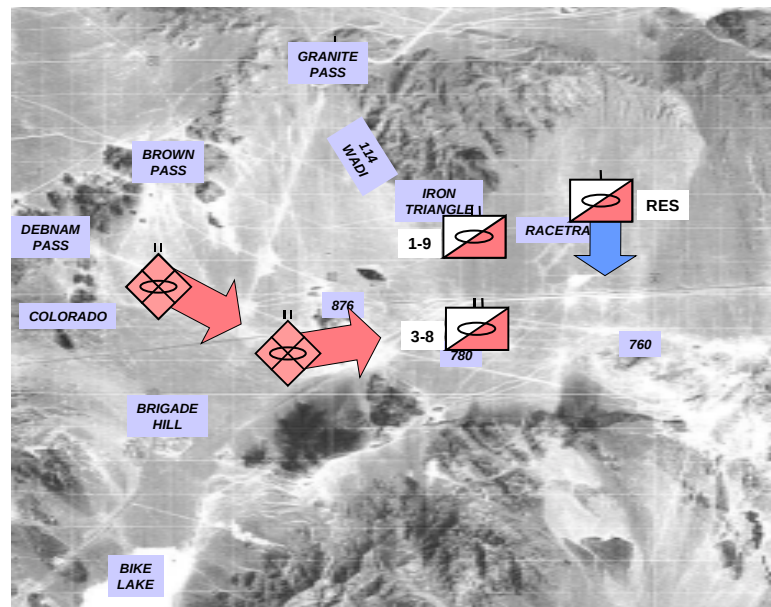


Figure 16. 3-8 CAV Defense in the South.

right there in that one piece of ground, not more than about a 1,000 meter grid square. At that point we stopped the OPFOR cold. What do I attribute that to? The battle command team went back and actually face to faced with the brigade commander because there was confusion on the intent. So, seeing ourselves, how we are arrayed. The second part of that, I think we had a pretty good read on how the enemy was going to come. That wasn't a problem. Seeing the terrain too, how we defend. Unsuccessful as far as the start and where we were going to put the obstacles. Successful in that the engineer company commander kind of keyed us that this doesn't make sense. We corrected that and we were successful.

What I would have done differently. I would have listened to the engineer more and went back to the brigade commander *earlier* and

said there's confusion on the engagement area setup and asked what we are responsible for in terms of brigade directed obstacles. We didn't do that soon enough and we lost a little time. Fortunately, because of the way the enemy attacked, we wound up okay. They continued to try to come south and run the South Wall. We thought that at least a company plus had penetrated, but it turned out it was less than a company. It was a very good mission. We conserved combat power for the main effort in the north while at the same time we maintained ops. And I don't recall what the end combat strength was. But, we still had tanks in the fight. I know both of the OPFOR battalion commanders and they said their commander was raging over the radio, "I don't care how the hell you get them, just kill them. Stop them." A classic. It was a good fight.

There was also brigade flexibility during that defense. And my running assessment keyed me to when to call for help from brigade. My northernmost company in that defense was in the Racetrack. We were just a little south of that. We were tied in with East Range Road. That northern company started to get some effective fires on them. Our

"Our running assessment told us we're having a problem here..."

running estimate told us we're having a problem here, we needed to get somebody in and backstop. The brigade commander moved a tank company team from north in

1-9 sector down into our sector. He was my team but he'd been attached as part of 1-9. This was unique because this company team had undergone a chem attack. They'd been slimed, so they were in MOPP4. So I'm listening to Brigade TOC tell Assassin Six to move to CP such and such and come up on 3-8 Battalion Command. Time... now. Couple of minutes later, ol' Assassin Six is on my net to coordinate. That quick. We moved him to checkpoint whatever, orientation is... with task and purpose to block the penetration of company moving from such and such. Time now. Report when set. And they're moving. That's their move. These guys are in MOPP4 and they got it in position. That was just one of those things where we, and obviously the brigade commander, saw that we would have to do something at the brigade level to backstop us in the south. We didn't have enough force in the south to be able to reposition to backstop ourselves. So, it became a brigade fight rather than just a task force. And it turned out okay.

And that was not the only move of Alpha 3-8. He wound up moving again because the enemy started to push north. So, OK, I tell

Assassin Six I want him to reposition. So he moved back again. So he did two moves in a matter of minutes. I mean, the guys were *moving*. It was just being able to see and that running estimate let us see that we're having problems here, or we're not strong enough here, or I want you to reposition because we can get some flank shots in. So, I'm not going to say all fights were successful because they weren't. I'm not going to tell you we were able to visualize at all times what we needed to do to be successful at all times. Several times that window just passed us by. The joke was: you're riding along in your track, maps flapping in the breeze and all of a sudden something flies by. And you go, "What was that?" Well, it was a decision point. You were supposed to make a decision back there, OK.

"Something flies by. And you go, 'What was that?' Well, it was a decision point. You were supposed to make a decision back there, OK."

But I think the key to the whole thing was, and we could deem it a successful rotation, because with each operation we got a little better. In every area, battle command, intel, maneuver, we got better. We understood how important it was to visualize where we saw ourselves. When we first started out, for example, we were a little optimistic in terms of combat power. You report number of systems for the first battle. But you know as you go through fights you start to lose vehicles; they throw a track, they get stuck in minefields, whatever. So, you start another fight and you think maybe you have enough combat power but you really don't. Instead of just doing the comparison of forces and telling the boss you understand the task organization he gave, you need to let him know you just don't have the combat power to do what he wants you to do. I never did that. I think in a couple of cases I should have asked for a little bit more combat power. You have to make the call of whether or not you can do it with available assets. If you can't get it, you work with what you have but he should know your assessment. You have to understand the commander's intent and then determine, based on the estimate, whether or not you can reach the intent. And you have to constantly assess, as the battle progresses, where you are and if you can if fact meet that intent and what it takes to do that. At certain times, you have to decide to move or reposition forces. At a certain time you have to say, I need to move the mortars, then I need to detach a

platoon. I need to get the Foxs forward to do a chem recon. I need to move the artillery out of harms way because they've been sitting there a while.

We do a decent job of insuring intent is understood. We brief the order as close as possible to where we are going to fight. Right after that we do a confirmation brief. Each of the commanders gets up on the map and states what the brigade commander wants us to do. We discuss task organization, mission, and task/purpose. "You want me to attack along this axis. You want me to reserve combat power. You want me to get here. I want to have at least three company teams at the conclusion of this fight so I can satisfy the follow on intent." Everybody briefs maneuver and support. What I think we did very well was we had all our liaison officers station themselves at the brigade TOC. So as information came out, they called or came back to their TOCs with the advance copy of the next order. And then we'd start the wargaming piece. So, when we got the actual order it was just fine tuning.

And the brigade commander was great about going around to each one of the TOCs and telling our TOCs how he saw the coming fight. We'd give him a back brief. He got out and made sure it's clear in everybody's mind what was expected. We didn't have to send a lot of messages back to brigade asking questions. There were some RFIs to brigade but as we went along in the exercise the list got smaller because we knew how the brigade commander fights. The last op wasn't perfect, but by the time we finished up, we all understood. And the AAR process was a good one. Everybody got in there and we all came clear. So we knew how we missed the mark on the targeting. We got to the point where we were really together.

47. Washboard Attack

Deliberate attack, force on force was in the Washboard area. 1-9's objective was around Crash Hill area. The Geronimos were going to hit objective Matterhorn right in the middle and we were going to go south. We actually did this mission twice. We started out in our formation, moved out of tactical assembly area. We're cross-talking and it's going pretty well. We get into the Washboard and it becomes one of those things where I want to go west, but I'm having to go north, and then south now because of the terrain, so it's slowing me down. As far as *seeing ourselves* we got too spaced out in our

movement. At a certain point on the ground, I should have said change to a different movement rate because we were going into the Washboard. How many folks maneuver down in that area? We found ourselves getting separated.

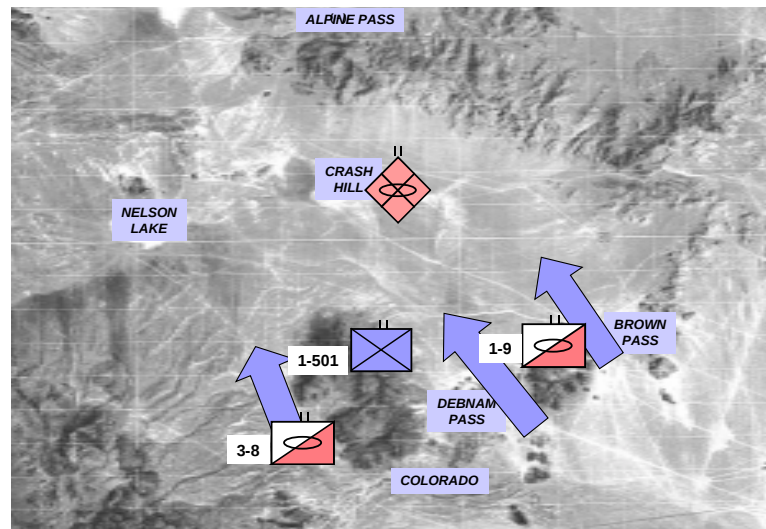


Figure 17. 3-8 CAV Attacks through the Washboard.

We were hearing pretty good situation reports from what is happening center and north. 501st and 1-9 are talking to each other. “I’ve got elements forward on this grid, continue to push.” Or, “I have contact, I can handle it with indirect/direct fire.” “I am maneuvering my Alpha team.” And the brigade did pretty well. In our sector, in the south, it turned into a platoon and section fight. So, the first company got in. The remaining companies were spread out. They were trying to not stay too closed up because of the terrain. They didn’t want to get bundled up. Well, the lead element got into the wadi system and started to fight and I couldn’t bring enough combat power forward to bear on the enemy as the fight started. We did pretty well in terms of attriting the enemy, but we just didn’t bring the combat power forward. We had platoons and sections fighting that fight. It really wasn’t a company fight.

We recock. This time we are going to go a little further south and really hit that South Wall and maneuver with tanks. Just get the tanks up high. Then also use the low ground, bring our infantry forward, perhaps dismounted if needed, and then attack the enemy. Cross-talk

is important. Not only within the battalion, but across the brigade because it was a coordinated effort. Hit them all at one time. 1-9 hits north, the Geronimos hit center, and I hit south.

The second time around in terms of maneuver, we did quite well. They were not expecting me to maneuver the tanks as far up on the South Wall as we did. I had tanks way up on the wall. They told us later on they just weren't expecting us. Normally tankers want to ride low ground. They may see the AT flashes but they continue to move. This time I was actually hitting the flanks of the guys in the AT positions because we were that high up on the wall. We were able to effectively bring all the combat forces to bear. I had a company/team that was south in my sector on the wall, I had one center, and I had one in the north just tied in with the Geronimos, 1-501 Infantry Battalion. We moved along and we were pretty successful in driving the enemy force off the objective and pushing them, causing them to reposition toward the Crash Hill area where they were taken under fire by 1-9.

Why successful? I think because we saw the terrain a little better the second time as well as where we needed to maneuver and where we needed to be positioned to effect fires on them. Seeing ourselves, tightening up the formation. I changed the organization in terms of putting some infantry forces in the center tied in with the Geronimos rather than just in the south. Then in the terms of seeing the enemy, we kind of knew what the set was going to be, where he didn't want us to go. We had an idea he didn't expect us to come so far south, the Washboard, and we were correct. So, we thought about how he would array himself. As it turned out, he pushed more forces to the south this time to take us on, because initially he had pushed north into 1-9's zone. We were thinking he would not expect us to come so far south and that his orientation would be northeast rather than semi-south so we wanted to come in to the rear of him. We were pretty much able to do that, higher terrain, so that worked for us.

Another thing, the relationship that we enjoy with the OCs was good. We dialoged well. We want to learn as much as we can during training. We stopped and did the mission over. He asked what are you going to do differently. We got the S2, S3, fire support, and engineer involved. Everybody got into the fight and it was more of a coordinated effort. As a result of that coordination, I was able to synchronize all the battlefield operating systems in order to bring the fire power to bear at the critical time. It worked.

48. Moving Cautiously to Contact

Movement to contact took me further east. I was moving from east to west towards 876 but I had the same problems. 1-9 was supposed to come forward and gain contact with the FSE, destroy them and the advance guard, and then I was going to hit the main body. I played a key role in the brigade fight as far as he starts the fight and I finish it. The way they came at us is they split the seam between us and hit us simultaneously.

I started out in my formation and as I started to move, my lead element got forward of my trail elements. I was moving in a modified box formation. So I had two companies, the lead and the trail company, and then tucked in the center I had the mortars, my engineers, and command and control element. So, we started moving forward. My advance guard company, Charlie Company, moved ten kilometers forward of the next element.

This is our first mission. So we are just trying to figure out where we are, the terrain association, the movement technique and rates. We had just gotten on the ground, feeling out the terrain. In the CCTT we had fought in NTC terrain but for the actual maneuver train-up we of course fought on Fort Hood lanes. You have to get reoriented with the ground. And a lot of folks will be new to NTC. And at Fort Hood of course the distance is limited; at NTC you see 5-7 kilometers depending on where you are. That's a hard piece because the terrain association and distance are different. Recognizing a target, even through a tank sight, and determining if they are at a distance they can engage or call direct is difficult.

We started moving forward and we got separated. Charlie got contact at the South Wall short of 780 to the east. Contact from AT weapons systems started to attrit him. By the time he got up towards 876, he was pretty much gone as far as combat power. As the command and control piece of that, yours truly tucked in behind the advance guard company and pushed forward. I got a call on the radio. "Mustang Six, are you the lead element in your task force?" It was Zero-Six. "Well, negative." Come to find out, I was one of the only surviving tanks forward with the advance guard company. They had moved so fast, so far forward, they got attrited. The only ones left were myself, the XO, and I think two other tanks. A combination of indirect fire and AT weapons systems just picked them off.

They just kept moving. They'd see the smoke signature and flashes coming from the south but they just kept moving. Before you know it, it's a tank gone, a Bradley gone, another tank gone and he gets there and is set at a check point but he has no combat power. I had him set and approximately 15 kilometers behind him is the remainder of the task force. And the enemy is closing in and they're trying to gain that ground so they have that bowl to fire the long range and indirect fires.

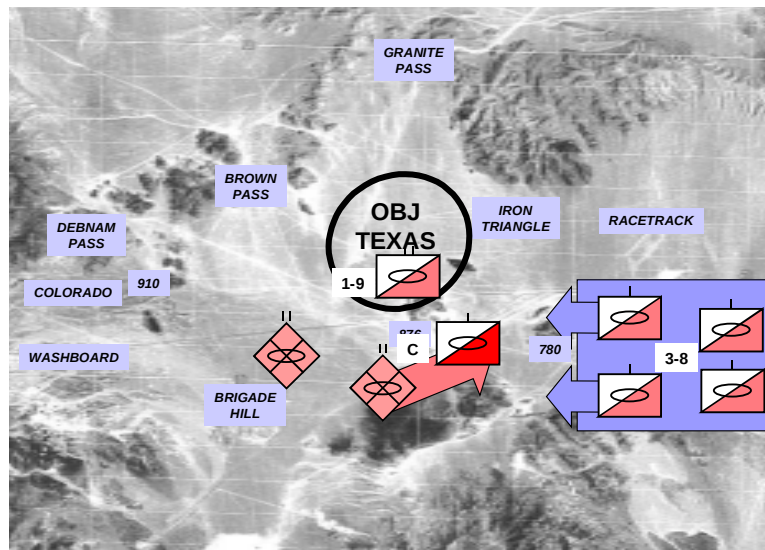


Figure 18. 3-8 Movement to Contact -- Central Corridor.

We started moving forward and what happened was I got two more companies set, Racetrack area and south along the main avenue of the approach coming through there. They were set. The enemy came in and started to move to the north, to try to run the North Wall at the Racetrack area. As it turned out, they penetrated with greater than a company and we got attrited in the area. We were not able to maintain momentum, move my advance guard companies forward to gain contact, and then maneuver the remainder of the task force on the enemy force. I didn't set the conditions to gain the key terrain that I needed, while at the same time attriting the enemy that had flank protection provided by the AT fires and indirect.

Early on in the fight, I kept getting SITREPs from the elements about where the enemy was and I saw that I was slowly starting to get

this gap in forces. Panic strikes and you say, "I want you to move as quickly as possible to checkpoint 51, Delta on to checkpoint 41." The first fight, everybody is just very concerned with 360 degree security. Everybody is moving to watch they are making checkpoints on time. They're not moving to the sound of the guns, just creeping along watching for those checkpoints. And I need them up there *now*, and with a sense of urgency. We just didn't get to that. We tried to play catch-up and the enemy was faster on the draw than we were, got to the key terrain faster, and I couldn't recover.

"They're not moving to the sound of the guns, just creeping along watching for those checkpoints."



So the recovery was really the reaction to the majority of his force coming forward and capturing that key terrain. We tried to get up there and establish a hasty defense and stop it. At that point, it wasn't movement to contact. It was a hasty defense and trying to defend what we had. It wasn't a matter of the battle staff not providing the information. It was me recognizing that to start out in the eastern portion of the zone we needed to move a little bit more quickly to get to a certain grid line, north-south. There, I could have moved quickly because I know contact is unlikely. So the entire task force should have moved out. And then I would have pushed forward my advance guard and continued to creep forward with the remainder of my task force. He gains contact, he sets the conditions, he fixes, and then I am

able to maneuver to the south, north or both to destroy that enemy force. I was never able to do that. What happened was instead of this we got attrited and pulled forward to establish positions to stop the enemy.

One of the things that limited us was communication. We used retrans. The first fight we lost contact because I didn't push a retrans forward knowing that at a certain point on the battlefield that the scouts lose comms with us. We didn't foresee that. So, I didn't push the retrans forward soon enough. It was like trying to get a SITREP. "Where are they." Before you know it, they are attrited but you find that out as you move closer and gain contact. We understood what we needed to do, but we lost control of it quickly because of the comms. I knew I had to tuck everybody in. I understood I have to maintain flank and rear security and I have the advance guard forward. I realized after we regained contact that we had not satisfied those conditions, so we need to fix it now. We were being reactive rather than proactive.

In the TOC, as far as the command and control, reports going to higher were pretty accurate. We got better as we went along. The XO was serving as my TOCmeister even when he wasn't there. My S3 Air, battle captain, was able to assess the situation based on the situation reports we got in from company team commanders and then take that information and put it together and send it to brigade. I think we did that pretty well.

Where we had a failing was the cross-talk between battalions. So, I have my fight going on but what are the recommendations I need to make to the brigade commander in term of what I am seeing in the south or in the north. And am I conveying that to my brother battalion commanders so they understand what I see in the south and what effect it may have on the operation. For example, in this operation, 1-9 was supposed to hit first, then I was coming and providing the punch for the main body. Well if he knew that my forces were separated and that my lead element had been attrited, then that may have caused him to move a little further south with some of his forces covering the flank until I could move forward.

We weren't cross-talking as much as we should have with the other battalions and telling them the situation we had. It was kind of like I'm fighting my own fight, tunnel vision. And too late I'm telling them what he may want to do. That first fight we were fighting our own fight rather

than visualizing what our part of the fight means and how important it is to the overall brigade plan. We got better at that as things went along.

All of these were learning experiences, some quite humbling. And they forced us to take a good hard look at ourselves and how we see the fight developing. You have to be able to visualize on the map and in your mind how you want to see the fight develop. Otherwise, it just becomes a happening rather than something that is planned. At the

“You have to be able to visualize...how you want to see the fight develop. Otherwise, it just becomes a happening rather than something that is planned.”

battalion level I have to look at the worst case scenario for me, and how to guard against that worst case scenario given the assets I have. I can ask for more but I may not get it. So,

given the worst case scenario, here is how I want shape my portion of the battlefield. If it's a defense, here's where I want to kill them. Here's where I want the stand-off in terms of weapons systems. Here's where I want to engage him. Here's where I want the indirect and direct fires to come to bear on him, because that's where I want to kill him. On the offense, the question is, what gives me the marked advantage over him in terms of time and space. I look at parts of the battlefield and decide how I want to fight at each of those points where the enemy may be. How do I want to fight each piece of the battlefield. You have to be able to see yourself and the terrain at all these different phases. And then we have to be able to constantly make an assessment, a running estimate, of where we are, where the enemy is, how we're doing as far as planning goes. Because sometimes you go off plan right away. Why would you fight the plan when it's not working? If he's already behind you, why are you fighting the plan?

LIEUTENANT COLONEL STEPHEN MITCHELL, 1998

49. *FASCAM Kills*

The first situation was a force on force defensive mission in Brown Pass. We had a couple of days to prepare for it. The weather was really bad; it was extremely foggy and visibility was really low. We had planned a FASCAM minefield that we were going to shoot into Brown Pass. When we shot the FASCAM minefield in, it would slow them down in the pass. I then had artillery targets planned behind the FASCAM minefield with MLRS and cannons to hit the OPFOR when they got caught in the FASCAM. We had a couple of observers who we put into position so we could see the targets and see the minefields so they could tell us when it happened.

The weather went so bad that the FA observers couldn't see the minefield. They couldn't see the targets. So the brigade commander and I started talking about whether we need to shoot this minefield in or not because it wouldn't do what we want it to do. And, I was thinking I sure would like to be the attacker today, this is great weather to attack in. But then I got to thinking too about how poor the visibility was in that pass and I thought that if we shot this thing in we might get lucky because the enemy is going to have as hard a time seeing as my observer is. We were trying to see the battlefield from the enemy's point of view.

"...I got to thinking... about how poor the visibility was in that pass and I thought that if we shot this thing in, we might get lucky because the enemy is going to have as hard a time seeing as my observer is."

We shot the FASCAM minefield in. I kept asking the observer, could he see anything, could he see anything. He couldn't see anything. He heard vehicles coming through the passes, he heard them stop, he couldn't give me any kind of account of what was going on. I shot the artillery targets in because I thought they might be in the vicinity of them. The conditions weren't set the way I wanted them to be set, but we went ahead and did it anyway.

During the AAR outbrief from the battle, the OPFOR commander came up and he started showing us what happened. His guys had sent their recon through that pass and of course there wasn't anything there then. After recon went through, we had fired in the FASCAM so the forward security element had no idea it was there. It was super foggy and they ran into the minefield, didn't realize where they got in it or where "out of it" was, and ended up losing their entire forward security element in the FASCAM minefield. They then pulled out and went down and changed their plan of attack and came through the southern passes. This was what we wanted them to do in the first place. Our defense was the strongest in the south. So, that was a decision that turned out very well. And we ended up with a decisive NTC victory.



It was fairly decisive there and also in the south. They rolled into our strength where we had 3-8 Armor. When they came in there, we had all our engagement areas set up. We took out the rest of the OPFOR down there, so it was a great day for the 3rd Brigade. I chose that one because visualizing the battlefield was key to that decision in trying to see the enemy. We didn't have the conditions set that we

"Visualizing the battlefield was key... from the enemy's perspective... he was going to roll through that pass and not be able to see anything."

wanted. It wasn't the way we had actually visualized the fight would go, because the weather wasn't what it normally is at the NTC, extremely clear and you can see forever. But I tried to visualize the battlefield from the enemy's

perspective and how he was going to roll through that pass and not be able to see anything. Typically we don't fire the FASCAM in for the FASCAM to do the killing, we fire it in to slow them down so we can

do the killing with direct and indirect fire systems. In this case, under those weather conditions, the FASCAM was actually the system that did the killing.

The other decision going on during this mission was, if you shoot the FASCAM minefield you are going to tie your guns up for about 30 minutes. Firing it in at that time of day was a risk because we couldn't see the enemy so we don't know his timetable. If he was coming in to us earlier, he might have been coming in and my guns were tied up shooting the FASCAM minefield behind him, as opposed to being ready to shoot the killing munitions on top of him. So that was part of the way that decision was made. Do we want to tie the guns up for 30 minutes for something that may or may not have an effect? That was one of the reasons for possibly not shooting. Also, the enemy has the capability of ARK-1 Radar at the National Training Center. So, when you're shooting the FASCAM minefield in, the enemy has the ability to pick up our guns on radar, then they can shoot counterbattery on top of them. So if you're shooting for a long period, you have your guns at some risk if the enemy has the radar in his artillery and range. We were not sure, because of the fog, exactly where they were positioned, even though we had guys we had successfully put on the battlefield who would have been able to see if it was clear weather. There were some unknowns in there. There were lots of unknowns but we went ahead and did it because we really felt it was early enough in the fight that even though we thought the CRPs, combat reconnaissance patrols, had already come through, we thought the FSE hadn't gotten through the pass yet. That FSE is what we really wanted to stop and kill. As it turned out, that is exactly what happened.

50. Trusting Your "Eyes"

A later decision wasn't a good decision. It was my decision, so I figure if I want to talk about a decision, I'll talk about mine. It was a live fire defense. As some background, before I took command of the battalion, I was an observer-controller at the NTC. I was training guys coming through there for about 16 rotations. One of the observations I made, that was somewhat of a trend, is that FSCOORDs would not believe their eyes, their FA observers. Their observers would report accurate information to them, would want to shoot missions that would kill the enemy. And typically the

FSCOORD or brigade commander would think they understood the battle better than their eyes did, wouldn't believe them and would do something else. So, I made a vow to myself I would never do that.

"...I made a vow to myself I would never do that. And then, there we were..."

And then, there we were... It was the last training day, the last fight. We'd stood up the engagement areas and we had our targets out and a target array was coming up on us. The brigade commander and I were together in a track and we had a pretty good view of the fight. Although not a perfect view, we could see it. I was fairly experienced with the terrain and had a high level of confidence in myself in terms of timing and how to kill those guys.

The OPFOR was coming in, first north, then the south, because we had slowed them down north with some FASCAM and some well-placed artillery triggers that worked exactly like we wanted them to in the north. They came in through the south and we fired those targets. And, I thought my observer in the south was not calling in his targets soon enough. He had a chance to catch them out deep and he didn't do it. They were coming in and I thought he could catch them again if he'd catch them in close. What he did though, he didn't call a deep

"I decided that he was wrong and so I overrode him on the radio and instead called in a target that was a little bit farther out."

target in, then he called in the real close target. I was off watching the battlefield, and although I couldn't see it as clearly as he could from where he was, I decided that he

was wrong and so I overrode him on the radio and instead called in a target that was a little bit farther out.

Well, when you play back the AAR tapes, and I hate these things 'cause they always tell the truth, what it showed was that as the enemy marched in there, they hit part of the target where he missed it, that's true. Then I went ahead and called the middle one, but by the time I got that called in, they were really coming past the middle one. And if I had shot the target he told me he wanted to shoot, they had hit an obstacle there and they were slowed down. That's where just about the entire enemy array was. And it would have hammered. As it was, because I overrode him and thought I knew better, the target we

shot went in behind them. So, that's why I'd said I would never do that but now I had. So, from a battle command point of view, I'd say it was a failure to see myself as well as I should have. Because I really had a high degree of confidence in that young captain's abilities and he had the better view of the battlefield. Really, in my opinion it was a great deal of arrogance on my part to override him and say I know better. If I had to do that over again, I would have trusted my subordinate, shot where he wanted to shoot, and we would have had a much more successful fight on that particular defense.

LIEUTENANT COLONEL JOE MOORE, 1998

51. Fighting Digital, Fighting Analog

In the Warfighter exercise we were well forward, performing, effectively, a guard mission for the division. Division is marching east to west into zone near Bamberg and Nurnberg, Germany. So the CAV's all out by itself, for the most part. But my air arm was flying well to my front, a lot more than it can in the current Kiowa air frames we have today, literally fifty plus kilometers forward of my ground assets. Plus, in my TOC I have access to the JSTARS imagery coming in and I have access to the ASAS and all the enemy intel that comes in off of it. But the key for me, sitting that far out, is the JSTARS.

We were in a defensive posture so the enemy had to come to me. Which meant he created moving target indicators, which is what JSTARS tracks. What JSTARS did, and what ASAS helped with, was, it gave me an enormous view of the big picture. I could see from Frankfurt to Stuttgart. I could see every single moving thing trying to come at me. And I could see it at about 200 kilometers to my front and then right into my face. And then with my helicopters I would fly out and confirm what those things were. This one is tanks, this one's BMPs, this one's artillery, this one's just trucks. And I could determine relative danger and threat and then start using the long range weapons to take the most dangerous of those and start hurting them early, attriting them early.

What that allowed me to do is, I then took advantage of that kind of information and scattered my three ground troops with absolutely incredible dispersion. Dispersion that would be (it wouldn't be risk taking) it would be a true gamble in the current technology without that kind of awareness. So I had one guy way up in Wurzburg and he's the northern most and then way down south, literally forty kilometers away, fifty kilometers away, is the next troop, actually the next two troops. And they were protecting an artillery grouping that was supporting us, an MLRS battalion, a cannon battalion and some other stuff.

They were also protecting the FARPs, where we get gas and bullets for our helicopters. So they're set way over here and they've got mutual

support and all those things you want to have. But they are in a protect-key-resources posture. And I had this one avenue of approach, the autobahn that goes through Wurzburg. Well to the north I needed to cover, block, slow potential enemy, particularly enemy recon that was coming through. And that was really their mission, to deal with reconnaissance, individual vehicles. I was going to let arty and air, helicopters, deal with the big guys.

Well, as the battle unfolded, we were controlling the tempo of the fight fairly well and I could see it. We had a very large formation coming straight at us that we had eliminated a good chunk of. But right behind it was another large formation. It looked like it was tracking along the same line of march which was directly toward those two troops in the south. And there was a large engagement area set up to the front of these two troops where they were going to hold the enemy in while we beat the daylights out of them with every other weapon in the arsenal. Which is what we had done to the lead guy as he had come through.

Well, that was when JSTARS went down - literally zzzppp - went off the net. We lost them because of a problem inside my TOC. One of those electron things happened and we had a corrupt file and the machine crashes - it locks up.

"That was when JSTARS went down - literally zzzppp - went off the net."

It crashes so hard, the guy had to use his networking capability to go in and get noncorrupt files off someone else's machine and reload his entire hard drive. It took about

an hour to move that much data back into our files, reboot the machine and come back on line.

Well, in that hour, I also happened to lose two of my aircraft because the sun had come up. We had gone from a night condition to a day condition. And when you go to day, the aircrafts' vulnerability to ground fire goes up dramatically because the enemy can suddenly see. And in that transition I immediately lost two aircraft. So, I called all my aircraft back into the over-the-shoulder mode, where they fly in friendly airspace and they avoid enemy ADA.

We were trying to develop a picture of where the enemy ADA was so I could get my air back out again. And in fact, about the time JSTARS came back on line, we had developed a route to get them back across our front line; back into enemy territory to do their mission of keeping me informed, in that next twenty to fifty

kilometers, of who is coming at us. Well, in that hour I lose my aircraft and I lose the JSTARS link. And while ASAS was up and running, it wasn't enough. And honestly, we weren't trained to exploit all the advantages.

So, we suddenly were very analog, a normal CAV squadron with a CAV troop stuck way out all by itself, unsupported. And in that time, that enemy trail guy didn't follow. He peeled off. He said, "I'm not going there, those guys have been destroyed.

"We don't have mutual support. We're blind to our front. We're just like we would be if we were a so-called normal CAV squadron in broad daylight."

I'm going to go this other route." And that other route was right through Wurzburg on the autobahn and right into my CAV troop. And when we looked up my gut said, "This is dumb. We don't have mutual support. We're blind to our front. We're just like we would be if we were a so-called normal CAV squadron in broad daylight. We've got to start getting mutual support." And right off the bat, I started moving my southern troops to the north. But they had a lot of ground to cover. The dumb move I made was I didn't order the troops in the north to disengage, fall back across the river that they were using as a shield, and move to link up with us. Instead they held in place while we moved to them because up to that point they had not had any really significant combat.

I had made the move for the guys in the south to start moving north to try to link up with them almost immediately after we lost JSTARS. Immediately I knew... this was bad and I needed to get mutual support. Say, that was right at the same moment. It was at least 45 minutes later before it clicked that I needed to get Alpha troop out of there. I still had no indication that the enemy had continued its route of march and by now I should have been in contact with them down south. I wasn't in contact with them down south. The battles in the south had just kind of petered out and ground to a halt. And the enemy had to be somewhere. And somewhere meant probably moving toward A troop.

So, 45 minutes later I ordered them to disengage and it was literally minutes later that the melee began up there and they ended up fighting with a single company size unit. They fought an entire regiment of the OPFOR. And you just don't do that unsupported by

artillery, unsupported by air, or any other resources. And in about ten minutes they evaporated, just went away. I lost the entire troop.

Later, this circumstance would be repeated with my Charlie Troop with two big differences. My air was flying and available to me and I had JSTARS, and I saw the situation coming. And because of a critical resource that was vulnerable - I had a slow-moving artillery unit that was directly in the line of march of this enemy tank regiment - I purposely put my Charlie Troop in the way to block that tank regiment so it would not get to the artillery unit. But this time I had three MLRS battalions in support. I had alerted and scrambled all my available Comanches, so I had six of them on station, all loaded with Hellfires ready to do their thing. At the moment of contact, *all that* came to bear on the enemy regiment. Because we could see the regiment coming. We could set it up and launch one aircraft out to strip away this guy's ADA early. So we flew, effectively, immune to his air defense the entire time. And we destroyed that tank regiment and I lost one tank.

To me it was the night and day difference between when you have good eyes deep, forward, JSTARS, and all this other stuff. When you add enemy situational awareness to friendly knowledge, then it's not risk taking to put a single troop in harm's way against a

"When you add enemy situational awareness to friendly knowledge, then it's not risk taking to put a single troop in harm's way against a regiment."

regiment. Not if you know you can bring all this other stuff to bear. But, when I went analog, where now I can't see the enemy well enough to target three MLRS battalions, even if I had had them (MLRS) in support, I couldn't have given them sufficient targets to shoot at to make them truly useful.

All I could see was the guy I was fighting to my direct front in A Troop. And behind that, and to the flanks of that are larger formations that are all closing. It was just unbelievable to see that with one circumstance I lose an entire troop and inflict minimal casualties on the enemy and with the other we absolutely slaughter an entire tank regiment and I lose a single tank in the exchange. And that artillery unit, that was such a slow mover, got away just fine.

The same kind of fight. Same isolated, no mutual support, all that other stuff. But difference was, the second time... one, we were

ready and had the time to see it coming and we set out ready to handle the situation, and two, we dealt with it vigorously. I could not do that during the first incident. And what I came away with was - if I ever go analog again, if I ever lose my deep eyes, I lose my ability to fly, then I need to return to the analog tactics of good mutual support, get the squadron together so it can defend itself, and my risk taking has to be moderated - a lot. Because now it is a gamble. I've got a guy who is 40K from his brothers and no way to help him out, and that's too far away for even some of the artillery systems to range. That's a gamble, not a risk, when you can't see the enemy with pretty good fidelity.

It's something I had never experienced before, because I've gone my whole army career with a so-called analog life, where you see the enemy to your front and you might see the dust cloud of someone closing. And there's a lot of ambiguity in the situation, so things like mass and mutual support and maintaining those at all times becomes a watch word, particularly in the armored community. But we don't like to move unless the entire task force can bring to bear its direct fire systems pretty rapidly.

In the world of AWE, it's not even risk taking. If you can see the enemy, you can exploit the added advantages. You can see bad situations develop if you are staying alert to it and watching for it. And that gives you time to go back to the old way. And if you need mass, then mass. But if you don't need mass, you can exploit the advantage sometimes through dispersion and you reduce your risk to enemy artillery or air or whatever.

I know we confused the enemy the entire exercise because we didn't operate normally, doctrinally, given the digital assets. The CAV alone might be strung out over frontages normally a division wouldn't cover. So to me it was an interesting observation that as you go digital, at the same time, we need to remember what it is like to fight analog, and fight blind. So that when it occurs, and you are suddenly blind, you immediately return to the principles that you grew up with. In my case I grew up with that, but today our youth might grow up in an environment where they are used to tremendous awareness of themselves and of the enemy. If either one of those two - either awareness of yourself or awareness of the enemy - suddenly evaporates, then there has got to be a very firm set of procedures they are supposed to do when that occurs so they can reestablish that awareness of themselves and the enemy, whichever one was lost.

And that was the piece I came away with. There is an SOP in my TOC now. If we lose that kind of awareness then, say, do the following three things. Bring all maneuver units closer together. Launch additional aircraft to establish some security for whoever is the guy left out. Get all of our systems, get all of our units under control and in support of each other in case something bad should happen during the time frame we are blind. More like a normal unit.

52. Hounds From Hell Racing Across Germany

I've been living with the AWE now right on three years. And I've been convinced from the very beginning that that kind of awareness, if boldly exercised, allows you to do things differently, grossly differently. The principles are probably all being applied, but we are

"Awareness, if boldly exercised, allows you to do things differently, grossly differently"

now in an era where we don't have to mass until we really need to and we can see it and pick the point we want to do that.

And if we want to avoid

contact, we can do that too. We can definitely fight a different kind of battle. And I have spent every exercise I have been in with 4ID trying to do that differently. I have strung CAV squadrons out that would just plain be stupid anywhere else. It could not be done.

I am not even certain it could be done in real life with the current training of our leaders - not the soldiers - the leaders, because of the isolation they would feel. That troop sitting in Wurzburg with the nearest buddy 40 kilometers away would have to feel like he is really in a hurt up there. Because in his tank, that troop commander can't see the things I can see and there would have to be a tremendous amount of trust involved. Probably Rommel and his subordinates in North Africa come closest to that kind of completely isolated view of the battlefield. Where an entire column would take off into the desert to go either get their supplies, or whatever, but with no earthly idea where the Brits were or anything else. Just tremendous confidence in themselves and the guy on their left, front, right, rear, and supplies. Everybody knew what they were doing and it would work out OK. That is kind of what is happening here except now at my level, a little ol' LTC. Theoretically if I had all these toys in a vehicle moving

across the desert, I can see stuff that has never been available to a LTC in history much less to O-6's and generals and everybody else. I can actually employ my formation in a truly bold and audacious manner, and not be gambling when I do it, actually knowing exactly what I am going to do.

Which kind of leads to my observation just from AWE, which may or not be applicable. In the exercise, we would get the opportunity to exploit an attack that had been successful and had destroyed the lead echelon. We went charging into the rear, and I was leading the way and was not aware the brigades were moving so slowly to my rear, just because I was not focusing on it. I had the blue situational awareness, I just wasn't paying attention. And while we were at it, we found out we had actually outrun the MLRS coverage, our longest shooter. That longest shooter could not even shoot my TOC or my combat trains, much less, my front line trace. We had gotten that far out.

So the ADC calls me up, "Come to a halt, back up, you're too far out, you're over extended," and on and on. And then I realized, yeah, I was way the heck out. But first, I had my own artillery unit traveling with me and then, I had my air arm up because it was night and we had full rein on the battlefield, JSTARS was working fine. I realized I had not painted a good enough picture of just how successful our attack had been. That I, as a little squadron, had wandered through this entire combined arms army with literally no contact other than trucks, which we had slaughtered as we went by. And we were doing it at almost road march speed which was why we had outrun everybody.

Then I explained the situation to him and immediately began asking permission. Let me go, let me go all the way to Heilbronn, which was another 70 or 80 kilometers from where we were at the time. I know I will outrun all the fires but they can catch up, because right now is the opportunity. I've already sent helicopters out and Heilbronn has enemy. They aren't expecting us. They're not postured for us. They only have ADA on our side of the river, which we can knock out. And we can deliver

"...for a brief period there, you could get a feel for what Patton must have felt like, screaming across France because everything we ran into we just slaughtered."

this MLRS unit that was with me close enough to really hurt these guys while they are not ready. And the CG got involved and the decision was made fairly quickly, inside of thirty minutes, to let me go. Oh, by the way, 3rd Brigade was going a different direction, head south and follow, and keep up as best you can. So, a hounds from hell kind of race across Germany began, and for a brief period there, you could get a feel for what Patton must have felt like, screaming across France because everything we ran into we just slaughtered. I had my air; this time I'm not depending on the Air Force. It's my air flying flank security and running my route before I had to run it. So if they wandered in and did make contact with the BMPs, whatever, they just took them out for us - just like the 9th Air Force did for Patton. This time though, it's an organic element.

And we went charging down there and slammed into the Heilbronn Bridge and in fact got the MLRS in range to fire in support of an Apache attack over the river just twenty minutes of when the Apaches were on station. It was that closely timed, that as we got there, got within range, set the MLRS, and started shooting missions, fifteen minutes later, here come the Apaches. Waves...two battalions came flying in. And what we would find out later was the whole division of the OPFOR would effectively die in the MLRS, Apache, Comanche, and CAS strikes that we would control for the next two hours. In the end, we killed so much stuff that we won the foot race to the bridge. We in fact seized the autobahn bridge that goes across the Neckar River. Well, we ended up dropping it into the water. That was one of our last acts.

But we didn't cross it, and the CG didn't want us to. He just wanted us to get control of the thing so they couldn't use it coming back at us, because we were in fact strung out. The division was actually moving forward in order to set a defense. And we ended up just getting there first, winning the foot race, got control of the bridge, dropped it in the water. And we did all that because we were able to kill all the guys who were guarding the bridge previously, with all these strikes.

At the time we thought we had killed a regiment. In fact, in the AAR, we found out we killed the OPFOR division and hurt another division in the process. And I ended up losing absolutely nothing. Interestingly, the enemy had occupied the area while JSTARS was unable to watch it. The way that JSTARS was set up was that it was still trying to support an overall battle that was occurring in Nürnberg.

So, its range limitation petered out just short of Heilbronn. I could see up to within 15K of Heilbronn, reliably, courtesy of JSTARS. I could not see the Neckar River or Heilbronn itself. And I sure enough couldn't see the approach. And no one else could either. I ended up flying my own helicopters out.

So, I had a very localized picture, of what it was like in and around the one massive bridge and all the small bridges that are in the town there. And our vehicle count had it up to a reinforced regiment. I'm not sure exactly why, it literally could be a blunder in my own TOC, or it could be just a function of the way the pilots would identify enemy in real life. And CBS did an OK job of replicating that. We literally thought the pilots were looking at the same thing when they reported because the bridges were so close together. When in fact, they were probably seeing different formations in the urban environment in Heilbronn and the wooded countryside on either side. And we'd get a report of 16 tanks in grid 123456... and we'd get another report of ten tanks in grid 123457 and we attributed it to being the same group of tanks, a confirmation. In reality it was two different sets of tanks and the concentrations were far larger. Since we had nothing else, these were all stationary, very low hits, in the way of JSTARS. And then you don't get very good BDA, which is probably a little unrealistic considering the Apaches and Comanches; those pilots love to report their BDA. And they have a TV tape that tells you exactly what they did or didn't do, so getting BDA off of helicopter is actually pretty easy, but it's not inside the simulation. So we had a hard time estimating our successes until we showed up with the rest of the squadron.

I would end up taking no casualties getting there, lost two aircraft in the battle surrounding the bridges themselves. Later, the enemy would counterattack us and we would have to rearguard for the division as it set up its defense. I would lose about a troop and change in ground combat power just fighting to control the bridge long enough to put it down in the water. We ended up dropping, I'd say, five or six bridges total, and ended up taking down most of another regiment's combat power as we tried to disengage ourselves from the Heilbronn area.

The result was we were able to set a defense where the CG wanted to set a defense; and we were able to do a great deal of damage to a guy who had every intention of attacking us 24 hours later. But now he can't because two of his divisions have been mauled very badly. In my

view, the opportunity to do that was again a function of awareness that does not exist in normal units and in the willingness to grab it and use it.

*“...two of his divisions have been mauled very badly.
...that was again a function of awareness... and in the
willingness to grab it and use it.”*

The fact that we didn't see the perfect picture, all the way out technically to infinity, is the reality. We saw the local picture extremely well and then there was just enough of an image that we felt we had an opportunity. And I think it was a valid opportunity. We knew the thing was defended. We knew it was defended in strength. The fact it was defended in *such* great strength was something of a surprise. But at least, on the near side, I knew in detail what was across the Neckar River and I could handle all of that, and did handle all of that. It was the other side of the river that was an unknown. But the son-of-a-gun has to get across that river if he wants to take me out. In my case there is a boldness, this kind of an awareness, making me comfortable with it. And not everybody is. There are a lot of people who are finding it hard to be that confident in what they are seeing and to go act on it.

They said in the AAR they were flabbergasted by the boldness. It was kind of humorous. The OPFOR commander during the AAR said he was in the middle of a shift change briefing when the word came in that we were attacking instead of setting a defense. But he had been convinced from the reads he was getting that we were moving to a defense. And in fact, he was correct at the moment they had had the read. We had all gone stationary. I was the only guy who had any interest in moving other than the 3rd Brigade commander. But we had both run out of gas and had to do a refueling. And we had halted to refuel. So the OPFOR had misunderstood that our halt and 3rd Brigade's halt had to do with gas, and the fact that we had to bring fuel forward and pump the tanks before we could sprint. It took me about 45 minutes to fuel up. It took them about an hour. Everyone else was in a defensive posture. They were getting instructions to shift to the offense but they too were getting all these supplies ready for this march across Germany.

And so, that picture the OPFOR commander had was momentarily accurate and thirty minutes to an hour later here comes 4th ID en

masse, all three brigades on the march, the CAV Squadron leading the way. And every one of them going absolutely as fast as their vehicles could go. I wasn't in combat order, I was in road march order, just like 4th Armor Division was in most of France. Move as a road march, let the aircraft find the enemy and just have an advance guard out there to make initial contact. And just go. 3rd Brigade right behind us was in the same condition. And he was using a UAV to give him the kinds of information that I was using helicopters for. He drove the same routes I drove down so I was his de facto advance guard. I had already been down these roads and cleared them. And the air had already been down the road before my ground showed up. So, it just gives us the ability in this case to move 3rd Brigade much more quickly than he would normally be able to do. We were all in the haul butt category.

There was no way we would have ever previously considered doing that. Short of being a Patton type of guy, we couldn't do that without the knowledge feed that it is OK, there is nothing out there that can hurt you. Because you are so vulnerable in that road march column. In an analog world that would have been considered foolhardy and the CG never would have authorized it. And a slower move would have been less successful. On our MTI we could see a large group coming out of Mannheim, out of the Rhine River area, and I had to get there first. There's no way I could have done that in a tactically dispersed

"I had to get there first. There's no way I could have done that in a tactically dispersed wedge formation pattern. If we were going to win this footrace, we had to move as a road march."

wedge formation pattern. If we were going to win this footrace, we had to move as a road march. Even then, we had to throw a lot of CAS and a lot of extremely long-range weapons at that other column that we were trying to beat to the Heilbronn River. Ends up it was an enemy tank division on the march trying, once it realized we were attacking, trying to get up there to reinforce the bridgehead.

I'm not sure if the OPFOR had the visibility we did during the exercise. I don't know. They knew we were moving again across the board. I'm not sure if they understood what all that meant. It was impressive that they picked up our move that quickly. But since

every single unit in the division picked up and moved at almost the same time, its not too surprising if every one of your scouts that are out forward suddenly all report, wall to wall, offensive action occurring. You would have to assume the worst, that you have a general offensive. He acknowledged he had no idea of the purpose of the offensive, just that it was occurring. And honestly, I'm not all that certain that inside 4th ID we really knew why we were doing it, other than we could. And it seemed to be a good thing and possible. Lord knows that the ground is more defensible the farther you go west, so we might as well see how far we can go.

53. Unknowns of Digital Doctrine

That is where the experimental nature of the exercise really comes out. Some things you just plain have to do so you can find out whether it is good or bad. The guys at the chalk boards can sit and discuss it all they want, but you have to fight a real enemy to find out does this really work. What does it mean to dislocate the other commander's mind from

"The guys at the chalk boards can sit and discuss it all they want but you have to fight a real enemy to find out does this really work."

the reality of the situation? When he is in confusion and trying to wrestle with what he ought to do, what are we doing, tangibly, what does that mean?

I think that it means a lot. And I think it is something that the EXFOR is capable of doing, if we can exploit the advantage, that no force in a long time has been able to do.

To do the unanticipated, the unthinkable. To drive through the sand dunes to get to the Euphrates River when only the Bedouins go through those sand dunes if you live in Iraq. Even the Iraqis don't go through those sand dunes. That's unthinkable to them. Why would you ever worry about that flank? Only guys with camels who have been doing it for generations go through there. And lo and behold, here go entire divisions of armor through there. It is hard for us to appreciate how unthinkable situations are like that, and its true impact on the other side's commanders.

I think that move to Heilbronn gave us an opportunity to actually knock the guy completely back on his heels; and make him less confident for the rest of the exercise. He wasn't sure just what we

could or could not do at each given point. And it is going to continue to cause him fits through the beginning of the next exercise I suspect. He'll have some answers if we continue to take advantage of the information we have. It's tough, it really is. If I can suddenly put myself in OPFOR's shoes, I guarantee, I could turn some of this the other way. I now know enough about it to know ways to make our life difficult. I'm not sure with his resources I could necessarily beat 4th ID, however you want to define that. But, I know you can deceive us and you can do things to make it hard. I'm not sure you can actually beat us because it would just mean you would have to give more ground up and it would take longer to kill you. But it's almost inevitable because of our ability to see, unless politics say you can not give up this ground and you must do a die in place mission, ala Warsaw Pact, Cold War, we will stand right here at the fence and stare you down. Then I don't see where the goodness of the EXFOR truly comes into play.

"It is hard for us to appreciate how unthinkable situations are like that, and its true impact on the other side's commanders."

If you are going to make use of the information, sometimes it means you have to step back, let all the artillery land on empty dirt and say, "Hi, now watch what happens." Or, step back and take advantage of the range advantage and our mobility which we have an overmatch of with most other the armies of the world. When we are forced to dig in we lose our mobility advantage. We let the guy get inside our range advantage and now we are trading attrition warfare. If attrition warfare... like say Korea, if the Korea theater required attrition warfare, then the EXFOR might not be that much better than traditional forces. It would be a little better because the information resources would be better, but they can't exploit all the advantages because the politics of the moment won't allow them to do anything else except attrition warfare. So, something like a Desert Storm and probably even a Bosnia, you can exploit your advantage in many ways and you are not as hamstrung. You have plenty of room to maneuver and plenty of tools that we would be allowed to use if we had to. Any theater with that strength taken away from you, then you might know the information but you can't do squat with it.

So, those are two that came out of AWE. I'm not sure it has that entire capability in real life. It only works in simulation, currently.

I'll probably be a retired old guy reading about it in AUSA or something fifteen, twenty years from now to truly see a unit with field capable systems where they are doing what we are seeing in a hard wire environment. I'm confident, just thinking of the leaps in technology we've experienced in the last twenty years, that given another 15 or 20 years, its hard to fathom what would be available to that generation. And right now the ATCCS terminal has a huge screen in a big ass box. Who knows, it might fit in the cargo pocket of a uniform by the time we get to that point. Whatever, it will be different than what we have now. But there is no doubt, if you have the information on the other guy, and you have the information on yourself, and you are equipped with lethal systems, and you have mobility, watch out. It's every Armor officer's dream, that's for sure. Give me the mobility advantage, give me a good weapon and then tell me where the other guy is. That's perfect. It'll be an interesting environment when that happens, no doubt about it.

I'll tell you, all those years at NTC, over and over, you see commanders can't seize the opportunity presented. They either don't recognize it, they don't realize they've just gotten the advantage on the OPFOR. Almost without exception, except for the worst defeats, almost every battle out there, there is a moment of opportunity, sometimes three or four, where if the guy would just seize it and boldly take advantage of it, they really have the chance to win the day. And, ninety-eight percent of the time, they won't recognize it or

"Almost without exception, ... almost every battle out there, there is a moment of opportunity... where if the guy would just seize it and boldly take advantage of it, they really have the chance to win the day."

if they recognize it, they won't act vigorously. They're timid when it comes time to taking advantage of it. How many 0-5s have ever seen their entire formation all in one field of view fighting another formation just as big? Or 0-6s? They've seen little electrons, but you look up and see 200 track vehicles fighting 200 track vehicles and the swirling dust cloud of activity. You just don't get to see that more than a couple of times in your career. So, why should we be surprised that they have a hard time recognizing it and seizing it when the time comes. Whereas the OPFOR commanders see it every month of the entire two years they are in command. They see it over and over and

over and they learn to seize the opportunity and to have trust in their sergeants to carry through.

We just don't get those opportunities. Without that situational awareness to say, hey I know where you are, I know that you have an exposed flank. And to get people confident that that reality is a reality and that if you will act on it you can take advantage of it. With the analog guy, he doesn't know that flank is open. Only the OPFOR knows that. He has to actually probe and go find out. Then he has to trust his sergeant who says, oh, by the way, there is nobody over here, follow me. Does an O-6 trust an E-5 he's never met with his entire formation, and if he blows it, they're all in trouble? Or, does he send a system over that tells him something. It's kind of sad that we'll trust the electronic eye before we'll trust the human eye and what he reports.

"Does an O-6 trust an E-5 he's never met with his entire formation, and if he blows it, they're all in trouble?"

It's more indicative of our American culture than anything else. We don't trust our politicians, but we trust our newscasters and our computers and what they put out on them. Politicians I can understand but I don't know if I'd trust the computers as much as some people do. They read it on the web, somehow its truth regardless of who put it there.

It's generational when some don't fully trust the digital inputs. If you go to my TOC, its commented that it's the best analog TOC in this experiment. That's because I'm the lowest echelon in the experiment and I'm not being supported the same way that the division's TAC One is. That doesn't mean I don't have more equipment. The biggie is I don't have Applique. I don't have any way of seeing my units like Applique made available to brigade. That piece is not being played in CBS. So, I am forced to use little stickies to track myself, not necessarily the enemy. I'm doing it the old fashioned way. I have my staff beat into submission that if there is a friendly entity that they can't tell me where it's at and what it's doing, combat strength, and everything else, I just beat them unmercifully. And they have gotten extremely good at picturing 1-10 CAV, and all those guys, and 1st Brigade and whoever is in my vicinity. There is no ATCCS machine that is as accurate as my analog map. Every observer has commented on it. I guarantee there isn't one because that thing gets updated by the second not by the half hour. And it's at

the icon level, we call it. When my guys in the sim center break out a piece and send it over here, what we call, split an icon, say they take two tanks and park them over here to be an observation post, I require them to report that. And the locations and everything those guys are doing, just like Applique would let me track those two tanks. I want to know about it. If the combat trains breaks into two parts, part goes here, all my fuel and ammo assets go over here, I want to know about it. So we create a new blue sticky to represent it.



So my entire organization and those friendly units in my vicinity are all tracked at that level. If our artillery breaks down into batteries, I make them plot each battery. But all that is, is a human workaround for a missing digital link that isn't yet provided in this experiment. That's really all it is. If I had Applique, I'd have better view of that than my guys creating this enormous map. And I would be looking at that to tell me the kinds of friendly information that right now my guys are doing the hard way. Now the enemy, I don't have any of that help. I have to use JSTARS and I have to use ASAS because the enemy's not nice enough to call me up with his location every time he moves. And it's working just fine. Now, we happen to post it on the sticky board just so we can have the two views of the same map. If I look to the right, I see the JSTARS view. I look to the center, I see my analog version of Applique. I look to the left, I can look at a blown up version of the ASAS screen or the MCS screen. You can toggle and see a whole bunch of it. So, we have a mixed set. We're using ATCCS for what ATCCS will currently let me see and we use analog to cover the gaps that Applique should be covering. Because

it's not a part of this experiment, it isn't there. To me it's not analog. It's just an analog surrogate for the missing digital link.

I'm not sure I'd be comfortable with these systems had I not worked with the systems at Fort Irwin. That time at NTC taught me to just plain trust the workstation. That gave me a view of the battlefield that when you tied it to other sources of information gave you a pretty complete picture. That's how I'm handling the ATCCS. I have multiple forums of information. But, put altogether, I have a fairly complete picture. Each one, in and of itself, is only a part of the puzzle. And, what I'm trying to train my subordinates on is, use all of the suite to complete the picture, not just little fractions. Stop being BOS oriented, if I'm the S2, I track the enemy. No. Well, you have to track the enemy in relation to us. So you have to understand where we are and what we are doing so you can understand the impact of what the enemy is doing.

For the artillery, you have to understand where the maneuver guys are. They're your protection. They're the guys you're firing in support of. For the maneuver guys, you have to understand where the artillery is or you don't have help when you need help. And we're getting through to them. They are seeing now that each has a piece of the puzzle. Some have big pieces. I'd say JSTARS is the single most valuable resource I have. It gives me a view of the enemy that nothing else can quite match. If I could only keep one machine, JSTARS would be the one I'd keep.

But JSTARS with ASAS together gives an even better picture. MCS with AFATDS complete a picture that, right now, MCS can't. But MCS and Applique,

"JSTARS is the single most valuable resource I have. It gives me a view of the enemy that nothing else can quite match."

or Applique's follow-on, FBCB2, that completes your picture. One at a low level of detail and one at a high level of detail. MCS is kind of gross, with big muscle movement stuff – I can tell you where a battalion is. So, a flank unit up to my north – it's a great way to track them. I can track all the battalions in 2nd Brigade. Say 2nd Brigade is 30 kilometers to my north – that's good enough. But I need to see 1-67, because they're doing a passage of lines through me, at an inordinate amount of detail. And I need to have a system that gives me that view because they are in amongst us, we're intermixed, and I have to be able to tell them apart so we don't do something stupid. Applique, or FBCB2, has

the potential to do that. Its interesting to watch all these pieces come together. Some people are getting confused. Some of my own guys get confused. But then they didn't get to stare at the Sun Workstation at Fort Irwin for a lot of years either.

The unfamiliarity is with young guys too. And at the same time their experience with the analog piece is low too. When we realized we had trouble with Alpha Troop, they couldn't solve it. So, when the same problem presented itself to Charlie Troop, they still couldn't solve it. It was unique having a situation where a tank regiment was fighting a CAV troop, guarding an MLRS battalion. It was unique. So, it's hard to teach that. We are going to do things that are potentially not normal according to what we now call normal.

And, our lethality may not be all housed within our tanks. Our tanks may be a force to hold the enemy in place long enough to take them off the map with other weapons, not just the tank. Whereas

"Our tanks may be a force to hold the enemy in place long enough to take them off the map sheet with other weapons."

today, the tank is the ultimate weapon. You do a lot of things with arty, attrit and shape, you delay and disrupt, but when the tanks show up, they do the killing. Well, its kind of

odd, when you start thinking about tanks holding in place long enough so arty can kill the enemy. Its completely backwards from anything we've ever done before, where normally arty disrupts the guy to allow the tanks to get in close enough to take them out. That's what I mean when I say this is completely different. It is different. And for everyone who says it's the same, just better. No, it's different - completely different. Our tactics, techniques, and procedures are different. I think, ultimately, we will see that we will shift in doctrine. Say, the principle of mass – it's probably true. But what's mass – tanks, or effects? Effects of weapons, effects of information. What's something like maintain contact? It is a truism that once you

"And for everyone who says it's the same, just better. No, it's completely different."

gain contact with the enemy, you always maintain contact.

LIEUTENANT COLONEL JOE MOORE, 1999

54. Seventy-Two Hour Guard

We spent almost seventy-two hours trying to guard the preparations of the brigade. It culminated in a regimental attack against the brigade which we had to actually defend. Part of that, they had been probing us most of three nights running. I was facing west strung out over about a 35 kilometer frontage which works from the top of Drinkwater all the way down to the Valley of Death. So, I had to find ways to communicate across Tiefert, find ways to communicate with my troop way up north in the Drinkwater Valley. So, the Drinkwater Valley avenues, the Echo Valley avenues, the Central Corridor, and then the Valley of Death. Barstow Road kind of defined our forward line of troops. It was just unbelievable how wide this sector was and the commo challenges that presented, how to use my air to fill in the gaps and some other things. It really made my brain hurt trying to deal with it. For most of three nights. The first night was relatively weak but we did have some activity, recon only. But the next two nights, it was beyond recon. They were sending in dismounts, up to a hundred at a time. And they were sending in company sized detachments of ten to twelve vehicles, trying to knock a hole in our guard line so the recon could go through it and find out what was behind us. And that just was a zoo. The stress on the troop commanders, the platoon leaders, and my squadron and staff and me was never ending.

Meanwhile, we knew this regiment was coming and we needed to do some things to get ready for the big fight which was inevitable. The casualties we took during the guard had an impact and caused me to reassess my techniques for the defense. It really complicated our life trying to get obstacles emplaced and trying to prevent fratricide as we're building obstacles yet conducting an ongoing, relatively lethal, fight in the guard. The night before the big attack, two hundred infantry, dismounted, and twenty combat systems tried to push their way through the guard line. Meanwhile we have some obstacles on the ground and we have some holes in the ground. In fact, one of my lieutenants was being evacuated with a broken nose because he drove his Bradley off into one of the tank holes. It was a tank position that

he was unaware of. It wasn't his platoon, he hadn't dug it. He missed the chem sticks. The way the chem sticks were illuminating the position, they were facing the other direction. The assumption was anyone driving up on the hole would do so from the rear. Well he did it from the front, being a scout he was out forward. Gun tube was over the rear and he's scanning for targets, and taking near misses in this little melee, and he drives right off into the hole. Broke his nose. He was with us again a couple of days later but I ended up losing him for the fight. That was how complex this battlefield had become.

I had to take a lot of risk. I ended up pulling most of the operational tanks away from my guys that were on the flanks. And I did it over time. So it started out looking about near three ground troops abreast. And then over the course of the 72 hours, platoons

"I have a pretty good idea of how this guy wants to fight. So, I stacked the deck for the fight I expected. And in fact, he would oblige me and run the North Wall."

were being removed and put in position on the North Wall of the Central Corridor. After many years at Fort Irwin, I have a pretty good idea of how this guy wants to fight. So, I stacked the deck for the fight I expected. And in fact, he would oblige me and run the North Wall. But I only had two operational tanks left in the south wall of the Valley of Death area. I had three operational tanks in Echo Valley and Drinkwater and that was it. Every other working tank was sitting in the Iron Triangle area by the time the sun came up the day of the regimental. In fact, largest MRB I've ever seen in my life and I've got a few battles under my belt. The single largest one I've ever seen tried to come through the Iron Triangle with a mission to fix me so they could run Echo Valley which was where the brigade commander wanted them to go.

My mission was block any enemy that came into the Central Corridor and put up a stiff enough defense that they would say, "The hell with this," and they'd go north in Echo Valley. It was OK if they went south into the Valley of Death but the preference was they not do that. So, those two tanks I had in the south, I had blocking the Valley of Death, for the most part, to persuade them not to do that. What he did was, he ran that new reserve component tank battalion abreast of his advance guard. And the tank battalion ran on the South

Wall, 876, Hidden Valley area. And then this AGMB that had something like 17 tanks and 40 some odd BMPs, plus all two hundred infantry, it was just enormous, tried to push through to the Iron Triangle. We would end up grinding all that to a halt right around the Racetrack and Hill 780.

They would get about five tanks on 780 from the reserve component guys, and they would end up getting about an MRC, bits and pieces, three tanks, six to eight BMPs, in the area of the Racetrack and the North Wall. But they were all from various units. They never did get command and control back. I didn't know at the time but I found out later. I still had a couple of tanks and a couple of Bradleys that I backed up to 760 to make sure they didn't come across the line. And they never did. And we in fact did block them, and they did in fact go to Echo Valley. The other tank battalion and the Apaches would get their chance to deal with them up there.

But the technique I used was to bring tank platoons down over the course of the day, then two or three days, slowly increase the combat power in the area I expected trouble. It worked. What didn't work was we didn't get the obstacles in we'd have liked. Lots of reasons, including training. We had not had any engineers with us in our train up. And with the restructure we are very very light on engineers. There weren't enough engineers to service the training and operational requirements at brigade, much less pick up a unit the size of 10th CAV. So, we trained with the engineers for the most part at the dust bowl at Fort Irwin.

The other comment I'd make about the mission we did is by running it for 72 hours, with day and night activities going on the entire time, culminating in the big battle, it put a stress on the squadron that I rarely saw when I was out at Irwin either as an OC or on my previous rotations. Back then, we'd have these discreet battles, almost like lanes. You'd start around sun-up or shortly before

"...running [the mission] for 72 hours with day and night activities going on the entire time, culminating in the big battle, it put a stress on the squadron that I rarely saw when I was out at Irwin..."

sun-up, and it'd end by around noon. Then you'd go into the AAR sequence and the prep day and all that. We didn't get that. So for about a three day period, it was just incredible. You watch what

you're doing. You never knew when you're going to encounter an enemy BMP or BRDM or something like that. One of my LNOs went out and left the TOC to go coordinate with brigade. And it wasn't a mile from the TOC and he collided with a BRDM in his Hummer and the BRDM would end up destroying his Hummer and killing my LNO. And we would have to go through all the gyrations of that. And that was in broad daylight, two o'clock in the afternoon, in depth, in sector. So, you never could completely ignore the fact that we might have been penetrated the previous night. We were constantly running sweeps, confirm or deny that the enemy was in the areas in the rear. Many times our real small, chase down the enemy battles, would go till three or four in the afternoon, after a night's worth of combat, to knock out the two or three guys who in fact got through. Just about sunset, the whole game would start all over again, and on and on.

That just was tremendous. It taught all of us a lot about ongoing operations while still conducting planning and still conducting coordination; revising tonight's plan given last night's experiences and losses. What did the enemy do well and not do well? What routes and avenues did he end up using? And that was happening all the way down to the youngest guy. The second night's positions were different from the first night's because they learned from it. It's the Duffer's Drift learning technique, because that's what it felt like. You had three nights like that. Each night progressively more difficult. You really felt like you were in the middle of a Duffer's Drift situation. And yet each night was unique. There were new twists to every night we were out there. So, that one mission was far and away the one I learned the most on, and I suspect in the squadron, if you ask most the leaders, they'd agree, it was the one they'll remember.

The live fire battle, where we went fifty kilometers and stuff, that was the most fun thing we did at Fort Irwin. But the one where I learned the most, got the most out of it, walked away from it having learned something myself was the 72 hour guard mission. And I couldn't recommend more highly more of those types of missions to any unit: infantry, armor, whatever. Something that will stress them over a longer period of time. Because it's closer to a real combat situation. Nothing's free. Even going out and doing a leaders recon, we had to take combat systems with us because we didn't know what was safe and what wasn't. The security in our FARPs and stuff went way up because we just didn't know, until we could do the sweeps, if

we had gotten them all. No matter how close we were trying to count, it wasn't that predictable. So, it was a good mission. Really was.

Everyone else was effectively behind us, at East Gate, down towards Red Pass. 1-67, which had been training under division control down south, was joining the brigade. So, their movement north to link up and get integrated into the brigade, and then the operations of the attack battalion, and their FARP and assembly area and all that; that's what we were protecting, along with a notional build up of combat power the division was doing off the reservation to our east. But the big deal was, we were supposed to stop any eyes from getting to a line kind of described by 760, north and south. If we could keep them west of that, then they couldn't get eyes on the air assembly area, they couldn't see what 1-67 was doing, et cetera. We had relative success with mounted systems. A few got through but we chased them down and killed them the next day, normally in the morning. We could find them and kill them, particularly with the air that I had available. But, the dismounted guys were a real problem. Chasing individual DRT teams proved very difficult. We got a couple but almost without exception they got some through that we never did find.

So, they actually had eyes on a number of things in the rear, courtesy of the dismounted recon. The nature of the squadron was, I just went out there without any dismounts because my 19D strength was so low. I just didn't have the wherewithal to work the ridges except with helicopters. And in the few cases that we found things on the ridges with helicopters, then we would form an ad hoc squad to go up there and knock them out. We couldn't patrol the ridges. We couldn't put our own OPs out. If I did, we lost equipment in the process. Bradleys would be unmanned in the effort.

One of the concerns I have with our new division structure is the loss of our dismounts. We just don't own the infantry and the dismounted scouts that we really need in most theaters. The infantry is not too bad because of what they are trying to do with upping the number of people in the back of their Bradleys. But I only own two scouts in the back of each of my Brads and that's assuming I had 100% which I did not. I ended up averaging 3 guys per vehicle and that left us very little dismount capability. It gave us a challenge, there's no doubt about it. It worked OK for everything except the dismounted guys. That was hard. Good mission, good event for us.

I know the OCs were frustrated by it and one criticism that I had of the OPS Group was they like to focus on that big regimental attack. Well, from our perspective, that was almost anti-climactic. It was fun, it was a tough fight, and the one true commander that controlled most of that fight got a lot out of it at the troop level. But since the brigade and all of its resources got focused on the regimental main body which went north, I had almost no artillery fire in support of me, no CAS, no nothing. It was a troop commander's fight. I had already resourced them with some extra tanks to try to deal with it, but nothing was available to me, as a squadron, to help them. The bigger challenge for me was that 72 hours that led up to that fight and the OCs didn't want to spend much time talking about that because that wasn't as interesting as their traditional melee fight. So, we spent no time in the big AARs talking about the guard. It's too bad, because as a CAV Squadron, we don't have defend on our METL, we have guard. Yet the AAR was a defend AAR. But it was OK as a training event. We learned from it. And at the troop level, they did spend a lot of time talking about the challenges of the guard mission.

A challenge, particularly during that mission, was I found it very difficult to get to places. I never visited my troop up north. I tried twice. It was so far away that to do it by ground it would have been an all-day affair, particularly since I had to drive way back to the east gate to get north. So I tried by air twice, and both times, with the weather and wind limitations, I lost use of the aircraft. So, for two and a half days I never visited the troop commander up there and had only off and on intermittent commo with him. And, I screwed up. I really needed to get up there at least once partly to see his fight, his problems, with my own eyes. Later I would pay for that, and he would too, when I made a decision because of my view of his fight which was not accurate. It was not the reality. He was trying to tell me. He thought I understood his situation. And I thought I understood his situation, and I didn't. So, I ordered him to do something he should never have done. It happened to be my troop commander who had only been in command a month, so he didn't know me as well as some others. So when I told him to do something that sounded a little odd to him, he gave me a, "Roger, out," and executed. My other two troop commanders who had been with me a year would have said, "Wait a minute, that doesn't sound right boss, reconsider."

So I really learned. Here I had my troop commander, that I knew the least, the farthest away. I didn't get a lot more personally involved up

there for what appeared to be sound reasons at the time. I didn't get as personally involved in some of the things relating to the transition to the defense and the obstacle effort. I found that time got away from me as I was taken back to

"Here I had my troop commander that I knew the least, the farthest away."

brigade for meetings or sitting with my own staff working on issues. Because of the free-flow nature of the fight, things occurred like the loss of my LNO. When we lost him, he had with him all the orders. It was kind of an adventure to figure out how to replace all that plus go out and deal with him. I let myself get too personally involved in some of that. So, I didn't give any of my ground troop commanders or air troop commanders the kind of personal attention that I feel we need to do in a combat situation. I ended up spending a lot of time talking to them on the radios. And we were so strung out we didn't have meetings.

The only commander I really spent some time with was that guy I thought was going end up with the main fight. And he would. I personally located my Bradley with his troop. And I was physically there during the fight and that helped immensely, but how to use my own personal time and having hard and fast philosophy and rules for things I wanted to get done with my time personally, and sticking to them, was a big lesson I got out of it. The tactics, nah, tactics were about right. Use of air was about right. I was a little frustrated with artillery but I'm almost always frustrated with artillery and its responsiveness or lack of. But that was about normal. The issue was more at a personal level...what could I do to make the captain understand his mission a little better? What could I do to help him with his fight?

I did find that in the night fights, the guard mission fights, I ended up operating from the TOC or the TAC instead of forward. The frustration I had is if I had been allowed to fly in the helicopter, that's where I would have been. With the thermals sitting in that helicopter and the comms in that helicopter, I could have seen lots of the different battles in each of the corridors very easily. At least in peacetime, I am not authorized to sit in that helicopter when it's flying around in the dark because I am not a rated aviator. That was a limitation because the helicopter at night was the one system that could see the whole picture. Instead, I had to look at a map in the TOC to track multiple fights across my entire front separated by many dozens of kilometers. The only place I could keep my finger on all of that was in the TOC and that was

frustrating but I knew that limitation going in. Later in live fire, during a day mission, I would go airborne and fight it from the air and it worked great, I wouldn't change a thing. But at night there are safety limitations which keep me from doing that.

55. Too Bold for Day One

If I had a mission to do over again, it would be the first mission, the movement to contact. It was very frustrating. We had an idea of what we wanted to do but were completely unable to execute it because of maintenance problems caused by the draw, inability to get boresighted, bad comms, et cetera. The Apaches were having all the same problems and a key part of the battle was contingent on an Apache success early on that never materialized. They too were going through the same problems with trying to get themselves unscrewed after an abortion of a

"I had a very bold plan, that required a high level of execution... But on training day 1, we weren't ready for it."

trip to the desert. We really ended up needing another day in the desert to unload all the backs of our trucks, get our comms straight and get ourselves re-oriented. We didn't get it, and I screwed up.

When I didn't get that day, in retrospect, I should have changed my tactics. I had a very bold plan, that required a high level of execution, something we might have been able to do on training day 7. But on training day 1, we weren't ready for it. I should have had a more cautious, more simple solution to the problem that we were closer to being able to execute. We ended up getting really strung out, and disjointed, and we lost all of our mutual support. The OPFOR took advantage of it.

We lost a battle we didn't have to lose, at least not that ugly. They really gave it to us. There was no doubt at the end of that battle, we were dead, they weren't. No other battle during the rotation did that occur. Every other battle, we might be dead, but so were they. Or we're still alive and they've got a few guys alive. Lots of dead vehicles on the desert floor and let someone else figure out if there is a winner here or not. Good fights with lots of learning and units could feel good that they'd accomplished something. They got pretty close to meeting their requirements. But not the first one. The first one we all walked away from it kicking rocks. I would love to do that again if I ever had the

opportunity. And I would definitely, in retrospect, change the way I did it. A lot slower.

The Apaches were having their own MILES problems. And their MILES are a lot more difficult to maintain than ours. They were having maintenance problems and couldn't get near the number of aircraft in the air that they wanted to. My awareness of that wasn't very high. I screwed that up. So did everybody else. Other than that, the rest of the battles were good fights.

We found we had a challenge getting information up. I described my TOC as being constipated on information. I don't think we train as well in our schools and in our units to know what product you give to higher headquarters if you are in a recon or guard mission. Is it an overlay? Is it a *long* SITREP? Some series of grids and date-time groups? What exactly is it and how do we format that so the customer, who was back there asleep and now he's getting ready to do his operation, has a quick, probably graphic, product to describe what's been going on? I think the digits are going to drive us to figure this one out. When you're trying to move acetate, move overlays, you get so overwhelmed with the challenge, with the mechanical piece of moving that overlay to a TOC that's 20 kilometers away in the dark, that you give up on it.

But, I've worked with my guys to look at what they are tracking coming out of these troops, air and ground. And then how do we get it to somebody so they can use it? We never got good at it. We got better at it but we never got good at it, even to the end. Reporting up from the squadron to brigade was never what it should have been, and I carried too much of that load on the command net with the brigade commander. I often would tell the brigade commander something that his S2 and S3 didn't know, because my S2 and S3 guys had not passed it up through normal channels. I think that's normal. I've seen it often enough at Fort Irwin and at BCTP, where a subordinate knows key information but for various reasons doesn't pass it up.

It's included in our training methodology. When you do lane training, the platoon or the company goes out to do training and has no higher headquarters over him. Then all he is doing is talking down. He's the last commo net that's established. Everybody else are just OCs or whatever. So, he never gets used to talking to someone above him; he's just talking down. All of us are really guilty of that. All commanders focus down and spend 99% of their time and energy on subordinate FM commo, sending and receiving instructions. It is very

difficult to train people to go to the boss and render SITREPs in a fashion that will help him track the battle, make key decisions, and influence the action. The only units I've ever seen that are good are the ones who go and do big exercises. They do REFORGERS, do NTC, go to Intrinsic Action where they actually operate for two, three months as a battalion, as a task force. They get better at it, until finally it's second nature. I've not seen a simulation or a STX lane that did it well.

We improved as much as we could during the NTC. Did it by brute force. I used to beat the living daylights out of the guys in the TOC every time I caught them not reporting. You have to give the guys the confidence to make some of those calls. It is not just higher to down, but down to up. "From what we're seeing in spot reports, my guess is the enemy is trying to do this." OK, say that, instead of just rendering a bunch of data points. Again, we had lost our digits. Our primary means to send a lot of this, the means that we had trained, was not there. When we went to the good old fashion way, we were slow and cumbersome. It got better, but it never got good. My S3 shop was stuck the same way. They were used to putting together a SITREP graphically and beaming it up. Now they were having to do it the old long-hand way. And they did it but we lost some of the information. The data made it, but the information of our real situation and what was going on got lost.



Again, I found that I carried a bigger load on the command net than I thought I would. This rotation I was working for an aviation brigade and some of what I was saying didn't always get understood. They thought we could move from one side of the valley to the other quite quickly because if you look on a map, the North Wall to South Wall is

seven kilometers at Hill 780. But you can't drive that straight line; you'll get killed if you do. You really have to back up, find a terrain you can hide behind, drop south and come forward very carefully, or one of the long shooters will take you out. Now, that is hours worth of work. But it's only seven kilometers as the crow flies, what's the deal, what's taking so damned long? Frustrating occasionally, but it was educational for us all. The good thing about the OPFOR is if you try to do that straight line drive, they'll normally punish you for it. So, you learn very quickly at the lowest level, don't do that. And they don't after the first day.

"The good thing about the OPFOR is if you try to do that straight line drive, they'll normally punish you for it."

56. From Parts to a Whole at NTC

I do not subscribe that the Army is worse today by lots over the Army of our last 15 years. It is worse today over 1992, as our Army returned home after Desert Storm. That is a true statement. There is no doubt about it. That was also the best Army we had had for 20 years or more. We were as good as we ever were upon completion of Desert Storm. The fact that we dropped from there is a given. We have not dropped below the standards of '89; we're about on par with that. What amazes me personally is that we are doing as well as we are doing. I think of all the training I got to do in '84 and '86 and '89 as I was getting ready for rotations. As a junior officer, the amount of time I spent in the field... only to go to Fort Irwin, and for the most part get pushed around in the desert and have a couple of good days, but most of the rotation the OPFOR had the upper hand. Then I go out as a Squadron Commander and as a Brigade S3...there were very limited field opportunities, very poor train-up by standards I was used to. Yet, we hung in there. By the end of the rotation, we had some successes. I suspect that the reason is we have good people. We've got good equipment. And once we get an opportunity to do intense training, in an event like Fort Irwin, at the end of 14 days you have a pretty good unit out of it. So, it's damn worthwhile one way or another.

Irwin is one of those training events that gets a lot of criticism because there is a lot of money spent. But in reality it is the only thing like it we have. People want to scale Irwin back to company training. I really disagree with that. We can do some company, and obviously

platoon training, at home station. But, the only way a captain ever sees what it looks like to have the squadron, the brigade try to do something is at Fort Irwin. Otherwise, all he sees is an icon in simulation or a cartoon at CCTT. And we don't have enough simulators to show the whole squadron, much less the whole brigade. But at the National Training Center he can look up and see his whole brigade, and he has to understand for the first time why his part of this battle is nested in the brigade's overall view of how to fight the battle. The commander's intent now starts taking on meaning.

When I had my conversations with my captains after the event, *lots* of it was on commander's intent. Some battles they understood better than other battles. And you could tell the difference. When they understood it, things went better. Conversations on the net were cleaner and understanding went up. If I ever confused them, because they are in this bigger fight and they aren't all by themselves on a lane, then that got ugly. That's when we had these disjointed affairs. Even though we could see each other, our minds were looking at the battle with filters in place because we didn't understand precisely what it was that was expected of us. That was great training for all the commanders to try to deal with that and get better at it as we went on.

You just can't do that in lane training. Try as you might to make it a decent scenario wrapped around a lane, it's never that good. Particularly, a fight like the guard mission where day one is different from day two, which is different from day three. Did I articulate the differences well? Did I make modifications that would work? Did the troop commanders modify their scheme to reflect what they were learning? It's good stuff. You just can't do that anywhere else. But it's expensive.

There are also a lot of criticisms of live fire that I generally don't agree with them. There are things in live fire that you learn that you don't learn in force on force. One of which is the lethality of friendly fire and an absolute concern for it. In force on force, in laser tag, you are unconcerned with it. But boy, we had an MLRS shot land short, it landed 300 meters in front of one of my troops, and I mean it got their attention. Having that round land right in the middle of the defending battalion's tanks made a very clear point. This is dangerous stuff. Small boo-boos can get lots of people hurt, direct or indirect fire. It's just that important in live fire to see what our Howitzer's do, to see lots of tank cannons and Bradley guns firing in a relatively concentrated array. You kind of understand suppression when you see all that as opposed to laser

tag where you don't see any of that, just eventually the lights start blinking. If you want to teach a lieutenant about suppression, during a live fire at Irwin he can see a close enough approximation that he can visualize it. He now knows what real smoking rounds look like instead of the hokey ones. In live fire you see all that.

Live fire was important. We got our procedures for passing our aircraft through our ground lines, so we wouldn't accidentally shoot them or call for artillery that would harm them, down to an art form. I've never seen it like that. We had never done it that well. Everyone was paying attention to it; no one wanted to be the guy who accidentally shot a helicopter. They would call saying they were flying back to go get fuel, and they're on air corridor so and so. We would announce that. And A Troop knew that air corridor was straight over the top of their heads so he would take his guys to a safe condition, put the alert out to all the guys in the troop that we have a friendly aircraft inbound. Everybody then depressed their gun tubes and ensured they did not engage. The pilots could actually see it. They could see guys out scanning and all of a sudden the sequenced visual of the guns coming down and the TCs coming up and waving them. They could see it and knew no one was going to hurt them. Same thing with the outbound leg.

It took the pressures of live fire to generate the seriousness and the energy that that required from the TOC, the flight ops, and the troop commanders and everybody else, all to get involved. We tried the same technique with force on force but someone would always screw it up. Not in live fire; they wouldn't run that risk. I think we got a lot out of it. We now all know what "right" looks like. We know it. We've seen it. We now know its importance. And in my next exercise, when I say I want to run air space coordinations the same way we did in live fire, everyone in the room knows what I'm talking about because they've seen it and know what "right" looks like. But up to that point we had not done it right. And, I was in one of those helicopters. It made me feel better and I had the aviator's perspective of flying through my own lines.

JSTARS was really the brigade's part for the rotation. I have no feed, which is a frustration for me. I have been a proponent, since this game started, that DIV CAV squadrons have to get a JSTARS feed directly into the CAV. Otherwise, I can't use my resources as well and I can't answer a lot of the mail from division. Everyone keeps saying the Division G2 shop, or whatever, owns it and that's a bunch of malarkey.

The Division G2 answers the CG's PIR and almost nothing else. So, here I am, a LTC out there in front of everybody, trying to track inbound systems. With just a little bit of early warning, I could have postured air or ground systems to be in ambush waiting on them. Instead I got very little of it. As it worked its way through the division staff, through the brigade staff, to finally be a radio call to us, it was a historical event. The guys were already on us. Yet, in the simulations where I had my own feed, with my own interest in mind, it was much more responsive. I don't care if it's a slave feed, where it's someone else's and I'm just getting an image of it, because I'm looking at it in a different perspective and I've got different tools available to me to deal with what I'm seeing. That's okay. Having my own Common Ground Station or something like it that allows me to manipulate the image is even better, but I can deal with it either way. But I had nothing; I didn't have any of the feeds. I just had the radio call that said, "Oh by the way." And, hopefully, whoever was on shift at brigade or division, had my interest at heart and called at the appropriate times. And we asked lots.

Same with UAV. We didn't have the ability to influence where it went very well and we couldn't see any of the images coming off of it. We found out later that a number of times they were actually looking at us and reporting it as enemy. The next thing I know I'm trying to turn off an artillery mission on one of my own platoons because that UAV's right over my head taking an image of us and he is unable to tell the good guys from the bad guys. We were so intermixed that that's not that surprising. At that point in the fight, the UAV's utility was pretty marginal, unless you had guys good enough to tell the difference between a Sheridan and a Bradley. Most of them weren't good enough to do that, particularly at the altitude they were flying the UAVs. But out deeper, where you can try to track the guys coming in, that would have been handy. But again, someone would really have to be paying attention and trying to answer my questions to make it useful as opposed to having my own monitor. I did deploy with a monitor that was supposed to have done that, but it didn't work. The system went down and never did work at any point during the exercise.

But, the entire brigade had tremendous commo problems which dated back to the hasty train download. I didn't get all my data comms in until live fire. I went through the entire force on force period and didn't have any of them. I couldn't communicate with any of the digits, couldn't make any of that work. Couldn't even make ASAS work or feeds coming in work until I got to live fire and then most of the feeds

weren't usable. There's no JSTARS feed for plywood popping up. The trick to me is if you are going to have a DIV CAV, a recon-based organization, it has to be able to access these feeds from above on a very direct level.

That is just part of the training opportunity and it's a relatively small audience. It would have been nice to try to figure out how to use the information for something other than a historical event. We would render a spot report that we are in contact with three unknown things, hot spots. We think two of them are BMPs. And then brigade would come back and say, "You're exactly right. It's two BMPs, and a BRDM. The UAV is looking right at it." So why didn't they report it to me first? Why did they wait for my spot report which energized the system and got people focused? Now that you are confirming this, whatever happened to picking them up before I was shooting at them.

That's what makes the NTC a great event. Building a training event that allows you to work that at Fort Hood or Fort Riley is really hard. So you go to a place like NTC and we all get educated on how hard this really is and how we have to depend on our young soldiers to understand their job well enough. That when that E4 is standing there looking at that monitor and sees something like that...bells and whistles go off and it's time to call somebody because that's a bad thing, that wasn't predictable, that needs to be reported. That's the kind of problems we had. How to communicate to the most junior guys, who are actually running these systems, the importance of certain types of information. It's kind of nice to say, well, you have to train them on PIR, and you have to have it posted and all that, but it's more than that. Nobody's PIR said report two BMPs and a BRDM, it never makes it into the PIR. Yet, for me and my troops that are out there well forward, those Bradley OPs, that's exactly the type of information they need. They need to know anything that's moving to their front so they can be prepared when they show up. It takes training.

"...we all get educated on how hard this really is and how we have to depend on our young soldiers to understand their job well..."

That's why I like the Duffer's Drift technique because you use a UAV one way the first night, modify it the second night, modify it again the third night. JSTARS didn't come online until we were facing the regimental attack so that wasn't one of our options. But the

UAV we got to work three different ways trying to improve it over time. And it did improve. It allowed me to vector aircraft. If I knew the UAVs were watching certain things, I wouldn't waste aircraft on those things. I let the UAV handle those NAIs and we'd go over here with the aircraft and do something else until the UAV picks something up. Then we frag aircraft down based on that spot report to respond. That's handy. That really allowed me to be efficient with the use of my resources, when I had something like a UAV or JSTARs to give me an early warning, when I had confidence in the operators.

I didn't have to do the classic screen line. Particularly, the classic air screen line where you move your aircraft in a double arm interval and they just sit there and hold a hover looking out to the west. I let the UAV and others do that and I used my aircraft to go and check certain very difficult areas and trails going through the mountains, whatever. And, I was able to do some risk management. I didn't have to send my aircraft out into enemy territory where they may get shot down. I let the UAV, the unmanned system, do that and kept the aircraft behind our friendly ADA until they knew they had something to go out and check on. Then they could go out very specifically and

"We all knew what we wanted but had a hard time getting there. That was realistic. That kept my TOC staff going."

check that target. That, in simulation, worked very well but did

not work as well at Fort Irwin because of all the human elements, and the training challenges of all those people in the loop. We all knew what we wanted, but had a hard time getting there. That was realistic. That kept my TOC staff going.

LIEUTENANT COLONEL JOHN PEABODY, 1999

57. Scatterable Mines, Force of the Future

I was the engineer battalion commander serving under the 1st Brigade combat team commander during the Digital Advanced Warfighting Experiment in the 4th ID. I think it was the second-to-last mission. I had gotten a heads-up from the engineer brigade commander that division was going to go on the defensive. We were conducting an offensive operation. This is somewhat frankly artificial because of the artificiality of Warfighter exercises. In my mind I think we can get some bad lessons learned out of Warfighters because we think we can do all these things and the electrons respond perfectly to what you tell them to do. The fog of war is dramatically diminished.

So, we had to go on the defensive. We had an extremely large area of operations to cover for the brigade. It was something like 70 or 80 kilometers wide and 100 kilometers deep in German territory. I got the indicator, the heads-up, from the engineer brigade commander while the 1st brigade commander was focused on the current fight. I started putting together a way to fight this. I was very concerned because we had something on the order of 18 hours to prepare to conduct the defense. That's just no time at all. So, what I did was I got one of the brigade planners. I also got my S3 and the ABE, and we went to the plans tent and we sketched out a way to do this defense. In my own mind, what the 1st Brigade commander had pushed us toward, up to that point, was to avoid what we call the "red zone fight," which is direct fire fight. We wanted to kill the enemy deep, using all of the Force XXI technologies we had available to us, including UAV, JSTARS, Raptor (ICO), et cetera.

The Raptor is similar to the Hornet. The Hornet is an intelligent minefield. It's a munition you place on the ground that you can either arm or disarm. In the armed mode it will shoot this munition up in the air. It will detect, within whatever distance away, a movement. If it is programmed to go against the light/heavy wheeled vehicle or heavy armor vehicle, whatever, it will go up into the air and shoot the munition top-down against the target and kill it. So, it's not a mine in the traditional sense of the word, but it is in terms of its effect. Raptor is just taking this munition a couple steps further in that it can in

addition to just detecting it locally, it can give you a feed back to a command post and tell you what it is seeing out there. So, it's another set of eyes on the ground. It uses seismic and noise detection devices to do this. So you get a digital display that shows you've got movement in whichever particular area you put the systems on the ground. This is technology 12 to 13 years in the future. We were fighting with technology we think we will have fielded in the Army at that point. The whole point of the exercise was to help the Army learn what it could or could not potentially do with this technology assuming it comes to pass and it all works like it is supposed to.

So, we are on the offensive. We are transitioning to defense. I came up with the plan to leave some of these Raptors out at critical junctures that the enemy would have to pass through to help get us the read. And then we could use that to not only arm the Hornets, that are part of the Raptor system, to kill any vehicles coming through, but also use it to do fires - artillery, CAS, some kind of deep fire. We focused our defense around a few areas where we could put Volcano minefields down. Its a ground-based system where you can put down 1100 meters worth of minefields in about 10 to 20 minutes, depending on the terrain. We picked about four, if you will, lines of defense on the ground in which we could put these obstacles down and around which the 1st brigade commander could then maneuver his forces. We intentionally left certain areas open either covered by Raptor, which we would arm once we were through that area; or took risk, in some cases, by not putting them down. I developed this plan in about an hour, it was very quick, with my guys. I took it in to the commander and told him we had a proposal how to construct the defense. I threw it up on the mapboard and briefed him on it. He approved it and told us to execute it. So we did.

As a result of that we were able to defeat an extremely large force. Again, it's Warfighter, it's all electrons. I am not sure if this would have worked in reality or not. But we really stopped a major effort by the enemy, who was advancing against us. I was not the primary decision-maker, the brigade commander was, but I came up with the recommendation that he approved and subsequently played out.

We had something like 24-30 separate Volcano systems underneath our authority at that point. My organic battalion only has six. If you know anything about Volcano, it's relatively high technology and very sensitive, and you have to have soldiers who are extremely well-trained on how to use the system. The platforms that

we put them on break down all the time, as a matter of routine. My most recent NTC experience tells me you have to have three to get one. At any point in time, you are likely to have about a 33% OR rate. If you get 50%, you are doing good.

First of all, scatterable mines are the force of the future. I think that's the number one lesson. We just don't have the manpower in the future reduced-force to put out conventional minefields. If you put together a good plan, it can be extremely effective. But on the other hand, we lost a number of these systems trying to put them in. We did have some maintenance difficulties in the Warfighter, although they are not nearly what I have experienced in real life. So, it was very effective in blunting the enemy attack. Then, after these scatterable mine systems were out for 24-48 hours, they pop after 48 hours, which was just about the time we were going to attack back through this area and we did not have to worry about any of those mines.

"We just don't have the manpower in the future reduced-force to put out conventional minefields."

58. In the Dirt

I don't think it's currently possible for an active duty unit, with all of the other things that we have to do, Red cycle, Special Duties, personnel shortages, and everything else, to be as ready as you want to be for an NTC rotation. But if you ever were ready, you probably wouldn't need to go out there anyway.

The first mission for the aviation brigade rotation, the aviation brigade commander conducted command and control from his UH60. He took me, the FA battalion commander/FSCOORD, up in the helicopter with him. We were going to command and control from the air. Sounds great. It did not work for me at all. Maybe it worked for the brigade commander but I don't think so because he never used that technique again. And I don't think the FSCOORD ever went up in the helicopter again to command and control during a current fight, the actual battle, from the helicopter.

There were a number of reasons. First, they had helicopter problems. That was out of our control. The thing took off 45 minutes late and there were fuel problems. Second, they didn't have all the FM radios that I needed to command and control from there. So I

was using a manpack radio with a long whip antenna and jumping out of the helicopter every time we landed on top of some hill. Trying to command and control using that technique was difficult.



The biggest reason I will never do that again is twofold. Number one, an engineer is, by definition, supposed to be the primary terrain expert in the brigade combat team. You can't be a terrain expert and understand how the terrain is affecting the current fight unless you are with the soldiers, on the terrain, in the current fight. You just can't. You have to be on the ground. As my mentor out there told me, "you are a man of *dirt*, you have to be *in* the dirt to be a man of dirt." And second, I have no control over that stinking helicopter. I am tied to the brigade commander. Wherever he wants to go or do, I have to go with him. That won't work for me. Just because he needs to be at a particular place in the battlefield, does not mean that's the place for me as his brigade engineer and engineer battalion commander. I learned that lesson the first time.

I made that mistake again though. This is the unbelievable part. The part where you look back and you say, "You could have saved yourself some grief by not making the same mistake twice." I didn't go up in the helicopter, but I tied myself to the brigade commander again on a subsequent fight. The advice I would give to any engineer is you have to figure out where the decisive point on

"I made that mistake again... I didn't go up in the helicopter, but I tied myself to the brigade commander again on a subsequent fight."

the battlefield for engineer operations is, ahead of time. Wherever that point is, that's where you have to be. If you are not there, you cannot provide value-added to the brigade commander during the current fight. You are then just a force provider. If you're just a force provider then who needs you anyway. That's what I would advise other engineers. Get out in the dirt. Get in your command vehicle, and *be* where the critical schwerpunkt is for engineer operations. In mobility operations, that's probably where the main effort is going to be doing a breach. You may be the breach force commander. Most maneuver commanders don't want to give their engineers that responsibility, unfortunately. If you're not the breach force commander, regardless, you need to get out to the breach.

I did apply that lesson in a couple of ways during the live fire portion of the exercise. First, we were doing a brigade deliberate attack. I think it was supposed to be a deliberate attack. It wasn't much of one because we didn't have good obstacle intelligence, which is fairly typical at the National Training Center. If you're going to have a deliberate attack, you have to know what the enemy has got, where he's at, what he has in terms of obstacles. We just never get the intelligence, or if we get it, it's inadequate. This was not an exception.

We had an attack aviation helicopter squadron, the division cavalry squadron, and one armor battalion under the brigade's control. The concept of the operation was that the squadron would initially attack, develop the situation, and penetrate the initial enemy obstacles. Once they got through, they would then pass the armor battalion through. The armor battalion would continue the attack. We would pass through in the vicinity of Alpha-Bravo Pass, go through the Alpha-Bravo Pass complex and then continue through Echo Valley and up into Drinkwater Lake and attack through the west end of Drinkwater Lake. That's what happened.

We had one engineer company, Charlie, with 1-10 CAV Squadron, the initial force. We had another engineer company with the armor battalion. And retained, for this portion of the fight, was our third engineer company. I put one of the platoons from this third engineer company with the first force, the squadron and our Charlie company. I left Alpha/588 Engineers pure with the Armor battalion. I took the third company commander and his company minus under my control and constituted a mobility reserve, which turned out to be extremely effective. I never had to use it but I had no doubt that I

could have. We attacked to the obstacle. We developed the situation. We found bypasses, openings, in the obstacle. We marked and passed the force through the openings. Once I got on the far side of the obstacle, 1-10 CAV had been attrited in their combat power and could not continue the attack. They passed 1-67 Armor through. Then I picked up the engineers from the 1-10 CAV Squadron. So, now I had a company plus for mobility reserve. 1-67 Armor continued forward with their organic engineers, Alpha 588, and we were successful in the attack.

Regardless of why we were successful, in terms of not taking a large amount of attrition, that mission allowed me to do two things. First, I was forward with the engineers who were breaching at the time of the breach. I could see what was going on and was able to advise both the task force commander, who was breaching, and the brigade commander on what the situation was from the engineer perspective. That was effective. Number two, I had command and control of some capability on the battlefield. Even though it wasn't used, again, it could easily have been employed. I could have committed them into the breach, put myself in direct support to the task force commander at any time, and continued to conduct the breach. But the most important thing is I was able to see the battle and provide value-added should the need arise.

59. Be at the Breach

Now, this was a lesson I learned by screwing up a previous attack. I had tied myself to the consolidated Volcano platoon. We constituted it differently than the MTOE, which spreads the Volcanoes throughout the engineer companies. I understand many other engineer battalions also constitute Volcano platoons. This has been the best way to go for us. I had determined in the second offensive operation we had, I think it was a hasty attack in the Central Corridor, that we needed to protect the flanks and I needed to be with the Volcano platoon in order to protect the flanks. Unfortunately, several things happened to prevent us from doing that. Number one, we never adequately synchronized maneuver coverage of potential obstacles we put down to protect the flanks. Second, we had significant NBC attacks in this particular mission. I was significantly slowed down by one and could not adequately place the Volcanoes in a timely manner. Most importantly, when the brigade had its forward force breaching

the weak point in the enemy obstacle, I was not there to see what was going on. So, I could not assist in committing more engineers to open the breach or advise the commander that he had the breach in and he should attack that point.

That was a very short window in time, about 30 minutes, where had we aggressively attacked through there, the brigade probably could have met success by penetrating the enemy obstacle system and taking the fight to the enemy. At the time of the breach, I was about 10 to 12 kilometers behind the actual breach operation, near 876, CHOD-Peanut Gap. I

was way behind them. When I figured out I needed to be up there, I skedaddled up there. But it was too late. By the

“By the time I get up there we have enemy pouring through against us where we had just breached.”

time I get up there we have enemy pouring through against us where we had just breached. The maneuver forces in the south are down to zero and zero combat power. The engineers are there but they can't fight the OPFOR with 50 cal's and MK-19s.

We didn't commit the maneuver force to a breach that was almost successful. This was at the brigade commander's order, and I just followed the order because I wasn't smart enough to understand there was another option. I wasn't there to see it as it developed. Instead of taking the other maneuver force and committing it down to where the engineers were making a breach, we gathered up these engineers and moved them *backwards* to where the other maneuver force was. We then committed them a second time in a second location. We piecemealed ourselves, and the result was predictable. We culminated shortly thereafter and went right into an AAR. And that's the same lesson I talked about earlier, the engineer provides value-added. Decide ahead of time where the decisive point is for engineer operation, and make sure *you are there* when it is happening.

**LIEUTENANT COLONEL FREDERICK RUDESHEIM,
1998**

60. Remnants of the FSE

My first battle at NTC was a movement to contact and I was the lead battalion. I gave my commander's intent for the task. Destroy two particular elements of the enemy, the forward security and the advance guard main body. The forward security element is like a company plus sized unit, and the advance guard main body is about a battalion minus sized unit. My purpose was to allow 3-8 to follow on and defeat the main body of the regiment, 173rd MRR. I had to complete my task up front in order to allow 3-8 to be successful. I gave some critical tasks under the emerging doctrine of commander's intent. I told my commanders we had to maintain momentum and move fast because I knew the enemy would be moving fast.

In the movement to contact at the NTC there are some knowns that would not be known in a battlefield somewhere else throughout the world. We've been fighting at the National Training Center for so long we know some things about our enemy. We know they are very good for one. We also know they will move very fast. Typically, they move much faster than we do and so they beat us to the punch. They get to the decisive terrain before us and then are able to maneuver and destroy us in detail. That is one of the things I wanted to do, maintain momentum, to achieve the decisive terrain. I had given objectives for orientation on the decisive terrain.

This movement to contact was in the Central Corridor. We were starting close to Hill 720 near the far eastern boundary of the reservation, moving west through the Central Corridor. When we wargamed it, we felt that our contact with the FSE, the lead combat element of the enemy, would be in the vicinity of Objective Texas. Objective Texas was located in the vicinity of the Iron Triangle, the area just south of Granite Pass. The terrain there, in the Central Corridor, it slopes down to the south. So, if you get up there, you have positional advantage over anybody coming through the passes from the west. The two prominent passes are Brown Pass in the north and Debnam Pass in the south. Anyone coming from west to east will either use those two passes or come through one more southern

option, called the Colorado, which is really broken. So, typically they come through one or both of those passes. So, we said if we can get to the vicinity of Objective Texas, then we will have positional advantage and be able to destroy the enemy as he comes out of these passes. That's the plan.

I had a very aggressive lead company team commander. It was a tank company team. He was my advance guard. His task was to destroy the forward security element. This one company was going to take care of that first element by himself. The FSE was going to be handled by my lead tank company, A Company, 3-8, tasked to me. These guys had been working with me for months. We were on the same sheet of music. There was about a 3 to 5 kilometer gap between this lead company team and the task force. The remaining task force consisted of three company teams; one more tank and two mech company teams. If we were going to have the FSE destroyed, it was also most likely going to severely attrit my lead company team. That was something I would have to accept in order to have my task force take on the advance guard main body, get to a place where I could have positional advantage on him, and then destroy him. 3-8 could then assume the main effort to destroy the red team.

When we crossed the line of departure, things were looking very good. We were moving very fast. We had worked on this for a long time and I had drummed home something that I had come to believe in over time after listening to a lot of smart people. That is, whenever you make the decision, there are three options when it comes to actual timing of the decision; you can make the decision early, you can make the decision on time, or you can make the decision late. Typically, what happens is we make a decision late. Rarely do we ever make it on time, and infrequently do we make it early. I think that's about wrong. If I am going to do anything, I am going to make decisions early. Because if I try to make them early, I just might be on time. But I can prevent myself from being late.

So, we are en route now. The entire task force is moving. I've got that dispersion about right between the lead company team and the main body of the task force. The lead company team is moving out with purpose. He does not have contact and we keep expecting contact to occur somewhere in the vicinity of Objective Texas in the south where there is a very important hill mass called 876, Division Hill. We expected that it would be somewhere in that vicinity that the enemy would be making it out of the passes and would be trying to

rush to this terrain and we would be getting there and there would be this fight between two like-size units at about that location. It didn't materialize. We were on the move and he's reporting to me "No contact." One of my first critical decisions is, do I slow him down and wait for the enemy to emerge from the passes and then take the fight to the enemy or fight him wherever that happens to be? Or, do I continue to push him through the pass? My advance guard was headed for Brown Pass, the northernmost pass. Again, my intent was to maintain momentum; I didn't want to slow them down. I am also, at this point, getting some sketchy information about the enemy. With a movement to contact that is expected. You are not going to get a very clear picture.

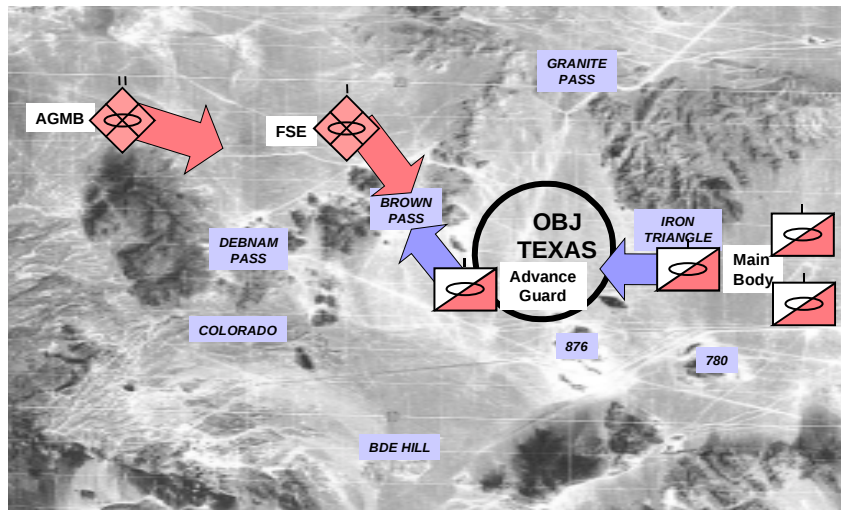


Figure 19. 1-9 CAV Movement to Contact -- Central Corridor.

I have very good reason to believe that the forward security element of the enemy is coming through Brown Pass. I have got some scouts positioned in the passes and they are telling me now in the north that the FSE appears to be headed toward Brown Pass. Now, I'm envisioning that we are going to have a meeting engagement between two forces in Brown Pass. I instructed my lead company team to go, to continue on. I had an objective that was just on the east side of Brown Pass, the emerging side for the enemy. This was our most successful course of action. The lead company was moving with such speed that he was able to get to this terrain. Rather than

have him try to move through the passes, where I thought he would have a weaker position, I wanted him to establish position on the east side of the pass so that he could then engage an enemy emerging from the pass. That's about what happened I am told. In fact, I lost contact with him.

The commo is very sketchy when you get into the passes because of the hill masses. When you get beyond the pass, you have to have radio retransmission in order to be able to contact somebody on the far side. I lost him earlier than expected. My last contact was he had made contact with the FSE. No more contact; all I know is there is nothing coming out of the pass. So by extension I am figuring something is going on here. There's a fight going on but I don't know exactly what is happening.

I did have one more subsequent contact with him and he reported doing really well and had destroyed the enemy's tanks, which is critical because the tanks are the enemy's rapid fire killing systems. It looked like he was having some significant success. I would add, to fast forward a bit, that the outcome was not quite as successful, ultimately, because the enemy threw an air strike in on him. A rotary wing air strike. I'm surprised they did that. It was interesting they would commit it to such a small force. But they did that in order to dislodge him. They attrited him. What ended up happening was a canceling of both the FSE and my advance guard company with *one* critical exception. The FSE had with them some AT-5 long-range anti-tank systems. Three of them, I believe. Two of them survived. And those two systems managed to get to the east side of the passes and just went to ground. They didn't continue the attack. They didn't have any combat power with them. They are not an offensive system; they sit on terrain where they can see a good distance. They can engage at max ranges, about 5 kilometers, and they destroy you at a distance. It is very difficult to pick them out because with the distances in the desert you can't even see the flash. So, those two systems were still alive, unbeknownst to me.

Now, my main body is also moving very fast. We have moved out into formation. We have used a system I have nothing but praise for now. That is we had colored panels on the rear of the bustle racks of our vehicles. What that does is give each company its own color code. I can, at a glance, as a task force commander, see the formation. Rather than see a bunch of vehicles that may from an aerial view look like a formation, but from the ground looks like a bunch of vehicles

moving in the same general direction, with the color panels I can spot the companies. I can see their relative positioning and I can see that we are in a task force wedge, lead company, two flank companies. Everybody is about where they need to be, they are keying off of each other, and the movement is rapid. Again, momentum being key.

Now comes the critical decision. I don't know the outcome of the FSE fight with my advance guard, and I do not know where the advance guard main body is. Now I said there were two formations I had to have contact with and destroy in order to be successful in my mission, the FSE and the advance guard. But, frankly I had no clue where the advance guard main body was. I only knew where it wasn't. It wasn't on the east side of the passes at the time. And it wasn't, to my way of thinking, up where my advance guard company was having to fight. But I wasn't even sure of that.

"Frankly, I had no clue where the advance guard main body was. I only knew where it wasn't."

We were advancing quickly and I was approaching the point where I had to decide whether to go north or south. I said in my intent I already had a predisposition to go north because the terrain was most favorable in the north. I also had planned an option to go south should the enemy be coming primarily from the south, Debnam Pass. If the enemy was coming from the north pass, Brown Pass, then I would likely choose the northernmost objective, Texas. Then I could engage him from the north into his formation. But if he is coming from the south, then I would swing south and establish the second objective. That's where I was going to engage him.

But, since I didn't know where the enemy was, I felt at the time, like I was on the horns of a dilemma. I had this massive formation of combat power moving with great momentum and I had to do something with it. I did have a conversation with the brigade commander and I said we were approaching the decision point to go north or south. He asked *me* where the objective was. My answer, if he had the commo cut would be "I haven't a clue." Our intel was way too sketchy. We had good coverage

"I was on the horns of a dilemma. I had this massive formation of combat power moving with great momentum and I had to do something with it."

in the north and that's why I kind of knew that's where the FSE was, but for the southern pass, we didn't have coverage and brigade didn't have coverage. So it was a void, an intelligence void.

To add to the battlefield conditions, I had a company commander of the lead team who has to go north or south calling me and quite appropriately asking me, "Boss, which way do you want me to go?"

"I said 'Go to Texas. Go north.' And there was comfort in that."

We're taught to be decisive. And as I said, my predisposition was to make the decision early rather than try to be on time or late. I said "Go to Texas. Go north." And there was comfort in that. I know where I'm going now.

I'm not uncertain. I'm sure I'm going north. The company commander was happy with that. He knew where he was going.

Unfortunately, it was the wrong decision. It was the wrong decision because that AGMB that we were all looking for so hard was coming south. It was coming through the southernmost pass, through Debnam Pass. I didn't know that at the time of the decision.

My lead company commander, the one who had asked which way to go, got to Texas. Understand, we still had not seen the AGMB yet and my guy has gotten to Texas. If I were on the other side of the passes with good eyes, I would have seen the enemy approaching the southern pass. My company commander gets there and says he's set at Texas. He says, "I've got great fields of fire, I can see for days, and I'm in a great tactical position." Oops. I ask, "What enemy can you

"It doesn't matter how great a position you're in, if your mission is to destroy an enemy and... you have no clue where he is, this is a bad thing."

see? What are you engaging." He says, "I see no enemy. I'm not engaging anything." Well, that's another thing I've learned along the way. It doesn't matter how great a position you're in, if your mission is

to destroy an enemy and you can't see him or you have no clue where he is, this is a bad thing.

So, I have nowhere to tell him to go yet, but I just know this is not particularly good. This company commander in the north who is now where he wants to be and all happy in Objective Texas, starts receiving some long-range AT fires from that AT-5 section who were survivors of that FSE, advance guard fight. But they're not

particularly effective to where he is. He's just telling me he's receiving fires. He is maneuvering and trying to fire on them but it is a very long-range fight. Minimal contact. But of course it's the only contact he has and he thinks it's pretty significant.

Now, again, he was only the lead. I have two companies in trail. One company generally to the north and another generally to the south, thus forming a wedge with the lead company being the one who went north. But, the southern portion of that wedge went to the south and stopped. Sat at vicinity Hill 876. This is a critical piece of terrain, almost center of the Central Corridor. All roads lead past Hill 876. He is now reporting some dust clouds coming out of the southern pass, Debnam Pass. Hmmm. He can't characterize it. He can't call it the AGMB. As it turns out, that is the only significant contact I'm hearing. But, just to clutter things a bit, we have that AT-5 firing at the northernmost company team and he's worried about that. Now, I have a third mech company whose commander is off the net. His vehicle went down so his XO is in charge. That third company team is still moving slowly, centered more or less between the two other company teams, west. I haven't told him to go north. I haven't told him to go south yet. But I still feel I have a decision with him because he is further back.

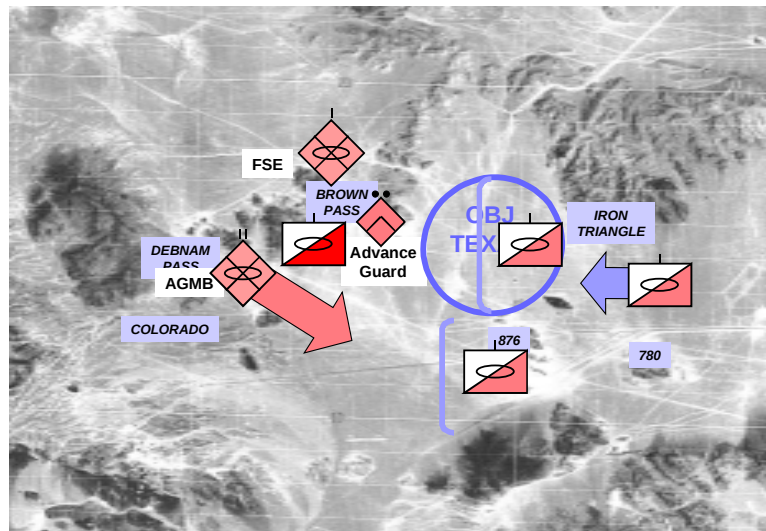


Figure 20. Advance Guard Main Body Maneuvers South.

In the next few minutes, it doesn't happen over a long period of time, it appears to me that I've got the AGMB in the south. I have a dialogue with my S2 over the net. "Where do you think the AGMB is?" "I don't know." They could be following the FSE. They could be going south around the FSE. I don't know the outcome of the fight. If the FSE was successful in Brown Pass, then it would not be infeasible to have the AGMB follow him because he has cleared the way. My advance guard had been destroyed and their AGMB could follow. Typically, that wouldn't be the case. The OPFOR typically like to send the FSE in one direction and the AGMB in another. It could happen either way and it can't be said they always do one or the other. In this case, he chose to go south. He chose to go south because his lead company, his FSE, was ground to a halt right there in the northern pass. He definitely wasn't going to send his AGMB right into the same melee. He was going to go south and he chose to go south.

That emerged in the next 10-15 minutes. My clue was I had T80 tanks coming out of Debnam Pass. They were being effectively

"My clue was, I had T80 tanks coming out of Debnam Pass."

engaged initially by my southern team, Bravo 3-8. So, I have two tank teams now engaging. I have my advance guard who, unbeknownst to me, is really combat ineffective because he took out the FSE, and I

have my southernmost tank team who is now engaging the lead elements of what appears to be the AGMB. And, I have my two mech teams, one in the north, and one coming slowly west in trail.

Now I make my second decision. Not a bad one at this point, even in hindsight. I said, "By golly, they're coming south." I directed the southern tank team, "Hold what you have. You must destroy the lead elements of the AGMB and allow us to maneuver Bravo and Charlie company south so that we can mass direct fire systems on the AGMB." The rest really was out of my hands as far as tactical decisions went because the company team in the north came south but his route south was the most direct. He went almost straight south. I did have a conversation with the commander, a great commander. The commander did not want to move. He thought he was in a great position. I told him to get down there now.

So, he then began moving south. But, that same AT-5 section that was bearing on him when he was in a defensive position with terrain

masking him... Well, when he pulled out, he didn't pull east and then back around south and west, he went straight south. In doing so, he flanked himself to the AT-5 firing system. He didn't know what he was up against. AT-5s, if you can't take them out and they are left alone, they will sit there and plink away at you until they destroy you in detail. His combat power was severely attrited before he ever made it to link up with the team in the south to then stop the AGMB. He got down there with a platoon plus out of three.



Then the trail company team arrived. The XO of the company was having a problem. A movement to contact is relatively simple to plan but difficult to execute because it is all about drills. Once you are on the move, being able to move to react rapidly is key. Unfortunately, the XO was unable to control the movement of the company and it continued west. That company was also attrited by remnants of that same FSE that were just sitting there. I hesitate to use the word remnants because it sounds like an unimportant formation, don't worry about it. But we have lost battles to remnants and that is exactly what happened here. We had an AT-5 section that took out the better part of the company team coming south and also ground to a halt this mech company team. They were hit by AT-5 fires and once they stopped they also lost some to indirect. So, the command and control of that trail company team was somewhat discombobbled. It was generally ineffective.

The southernmost company tank team did a superb job, but the combat power wasn't there to stop the AGMB and they eventually were bypassed. In summary, we failed our mission. We did not stop

the AGMB. We were partially successful, but that doesn't count. We took care of the FSE and destroyed some of the AGMB, but not near enough. So, the OPFOR was still able to engage Task Force 3-8 and they were attrited by the AGMB and didn't have the combat power to take on the remainder of the regiment that was following. The battle, in that respect, didn't go well.

The critical decisions that I felt I had to make were two. First, whether or not to have my advance guard company team continue in its attack or to come to a hasty defense and await the FSE. My call was to have them continue on and that one was about right in hindsight. My second decision and the one that I want to focus on is: whether I go north or south? I'm trying to convey a sense of momentum. Momentum is a double-edged sword. You have an entire task force worth of combat power moving inexorably in one direction and you are trying to make a decision as quickly as possible as to what to do with it. It's not like you can turn it on a dime. So, you are trying to decide what to do. I reached the decision point where I had to decide whether really to stop or to slow a whole lot and await further resolution of the enemy situation which, in hindsight, was the right thing to do.

In hindsight, I believe I should have, as I did not know where the AGMB was, slowed the task force down and remained more flexible. I removed some of my own flexibility by committing to the north. Once I did that, now I had to repair my decision by bringing company teams south that I had already sent to the north. This is a large area, a five kilometer spread. Movement from the north to south is anywhere from 3 to 5 kilometers. It's not something you do very quickly. So, that cost me dearly. As my first battle of the NTC rotation there was plenty to be happy about, if only because the formations looked and moved well. I was told later on, and of course choose to believe the OPFOR regimental commander when he said he was very surprised at how quickly we moved. We caught them by surprise by being in the pass when we were. BLUEFOR units, being blue and ponderous, don't usually make it to the pass. So, the OPFOR has the ability to choose what terrain they want to use. They were getting good reports also about our position. Of course, this is in hindsight. They knew we were moving very quickly towards the west and they were waiting to see whether we were going to go north or south. He had better intel than I did and he knew that I had committed more. Again, I'm told there was an animated discussion by the OPFOR about whether or not

they needed to move or even go to ground, to stop and go to a hasty defense on the west side of the passes.

For further thought, I had another option that I didn't exercise because it seemed like it was too dangerous at the time. That was to continue to press the fight through the passes and to take the fight to the enemy on the west side of the passes. A totally unheard of thing to do but I really felt that with the time and distance I would find myself caught in the passes rather than getting to a positional advantage. So, I completely discounted that. I still think that would have probably been a very long shot.

But, again, the enemy was somewhat concerned, I'm told, that the formation was moving fast and he felt like he needed to hurry up more so than normal. He had to get through and get set so he could be in position before things started to happen. Truth of the matter is, had I made the decision correctly, I wouldn't have committed north and then retained the ability to bring my two company teams south... slowed things down and let the situation develop, get more intel. If I had just taken the lead from the company team in the south, that now we've got significant dust clouds and oh, by the way, I see T80s in the south... Boom, now I know it's south and I take my other two company teams and I pile them all on in the south. Then we have a good chance of destroying the enemy in the south. I pretty much gunked that up when I went north. Not that it was an irretrievable error. I think we still might have pulled it off, and were attempting to, but it was hard business trying to get from the north to the south. They're not chess pieces.

"...it was hard business trying to get from the north to the south. They're not chess pieces."

61. Fighting Dirty

The fight was deliberate attack. It was at the brigade combat team level. It was a rather complicated plan. Not impossible to execute; we had done it in simulation. Certainly no validation of what works on the ground, but it was planned well. What we wanted to do was present the enemy with an attack that was not coming from the same direction you typically see. So, we wanted to present him with a dilemma where we were coming at him in numerous directions. In

this attack, I was the main effort. Now I was attacking through those same passes, Brown and Debnam Pass, to the west, to an MRB minus defending vicinity Crash Hill. The brigade plan was to have a light force plus a mech company team come from Alpine Pass and come in from the northern flank of the enemy.

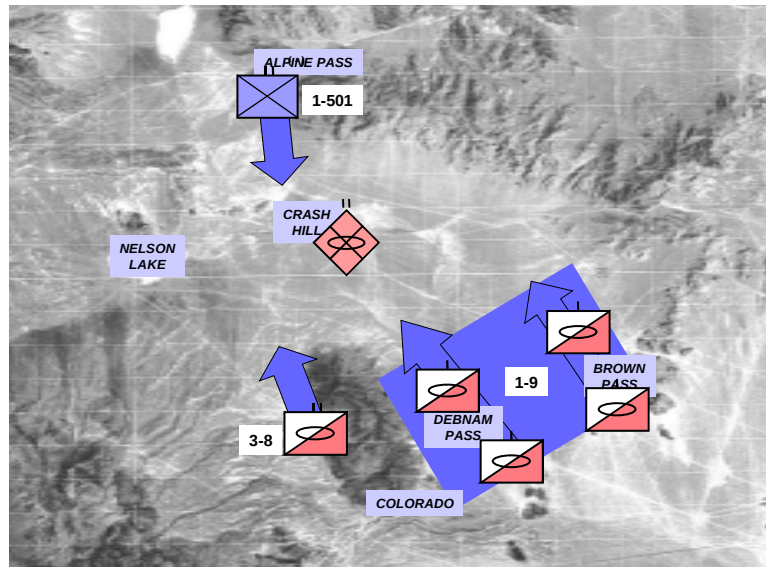


Figure 21. Attack Through Brown and Debnam Passes.

We had Task Force 3-8 coming through the Colorado in the south and then coming around to the north. So, you had a force from the north and a force from the south. I was coming directly into the defenses of the enemy. The timing was right and the most difficult thing was timing. You have three formations, three different battalion task forces, that are coming from three different directions; and the key was to be a near simultaneous attack so that the enemy couldn't deal with each one of us exclusively and then refocus to the others. Our intent was to provide him with simultaneous attack from three directions. The enemy's strength was his interior lines; his ability to read position very, very quickly with no enemy force between his repositioning effort. That's the definition of interior lines. So, if you take that away by freezing forces in the north and the south, then he has very little flexibility and his defense is greatly weakened.

My commander's intent was mass combat power at the passes. One of the things we have a problem with is coming through the passes. The passes naturally disarticulate formations. If you're not careful, you push out and you may never get your stuff together before you move on. We wanted to make sure we massed our combat power. Then we wanted to be able to identify where it was that we were going to breach because we had an enemy's defense that we must breach. I had engineers with me and we were going to have to do a task force breach, which is a pretty complicated operation. I was to then take the objective.

We did this mission twice. Its very unusual to redo a mission. The Assistant Division Commander for Maneuver made a great call. Before we even kicked off the first attack he said, "this is a really complicated mission." There's an eight step training model we use and the last step of the model is retrain. He said to the OPFOR, "Rather than do another mission, I want them to have the opportunity to do this mission again, regardless of the outcome of the first mission."

As it turned out, the first time we did it we came through the passes. We had secured the passes with infantry, which worked out well because the passes tend to be the first real challenge; getting through the passes without getting gunked up. Certainly, we expected the enemy to attempt to cause confusion in our formations with several means. One was to have enemy in the passes sniping at us and causing us to react to contact. That really pulls the formation apart as they're trying to move. The other thing is they use artillery to deliver mines. It causes you to no longer be able to use a pass without having to breach and also you lose vehicles. As you try to move out of the pass, artillery delivers mines and they fall all over you. As you try to get out of them, it destroys more vehicles. It is a real dilemma. The enemy in fact did that. He used artillery delivered mines on Debnam Pass, the southernmost of the two.

We were doing something which made folks nervous, but I was confident. We were using both passes. Command and control is a little tougher, but I wanted to have my options open. I didn't want him to close me down and then I'm all stacked up on one pass. I wanted to have combat power coming out of both passes simultaneously and twofold, I wanted to get out rapidly. I can move through two passes quicker than I can move everyone through one. Second, he has no idea where my effort is going to be. He sees me coming out of both

passes. He doesn't know whether I'm going north or south. I'm not tipping my hand early. I'll tip it but I'm not going to tip it now.

He used FASCAM in the passes but because of our use of infantry, and I have high praise for the infantry, they did a superb job and that's what we're all about, we had already secured the passes with infantry and had alternate routes marked. So, when he dropped FASCAM on us, we had marking systems and people who were there to point a new direction. I say you can't turn a formation on a dime, but it was pretty close. We did lose a vehicle or two to the FASCAM but everyone else turned and went in a new direction and used an alternate pass. We talk about Brown and Debnam but there are a lot of ancillary passes. We used the alternate pass and got through there with no problem.

We got to the far side and collected ourselves. In the desert coming out of the passes, the passes are high ground and then it slopes down and then it actually gradually rises again to this enemy's position. You can see a long way. About the time we came out of the passes we called for smoke. It was very difficult to adjust the smoke and it didn't go as well as we had liked. But that was not the toughest part.

Our intent all along was to go south of Crash Hill, which was the dividing point in the Central Corridor west. You go North Wall and Crash Hill or you go South Wall and Crash Hill. That was it. The enemy wants us to go north because it's more condensed. The hill masses are actually a little north so the enemy is able to mass more direct fire systems in the north and he can get you from more angles if you take the north route. What he attempts to do is look very strong in the south, puts in a tank ditch, et cetera, to push you north, so you want to go north. We didn't want to go north. We were now on an azimuth to go south. As we were doing this, I had a lead company team that was going to set up a support by fire as part of the preconditions for sending my breach force forward to initiate the breach.

But enroute the enemy threw some conditions at us that really caused me to make a decision. It was critical. I had to make this decision along with the brigade commander. As we were moving, coming out of the two passes, we sort of merged together, but there are still two major formations. The enemy is still not sure which way we were going to come. As we come along, he does something, which really makes life tough. He uses persistent chemical tied in to

FASCAM. And, if you have a persistent chemical agent and you don't know where the center of mass of the radius is, then you have no idea where the contaminated area is. You must use Fox vehicles in two different locations and triangulate to figure out where the point of impact is. Then you have a very limited radius, about one kilometer around the center of the impact, you just stay out of it and you're fine. If you don't know that, you're hurting. Because then you must template a much larger area, since you don't know the exact point of impact, and stay out of these grids. So, thank you very much, I have nowhere to go. What he also did, very wily enemy, was to shoot FASCAM and tie it in. So, even if you know exactly where the chem is, you have to go around it and now you've got a FASCAM. And by the way, its not open, there's the southern wall. So, it's the southern wall, can't crawl up that thing, then the FASCAM, then you've got your persistent agent. Very nice. He did all that to prevent us from going south.

So, as we were coming in, we got the persistent agent and we lost some vehicles. We were unable to determine the precise point of impact.

So, they gave us some grids to stay out of. It was tantamount to saying you can't come south unless you want to fight dirty, contaminated. Now, I had

"It was tantamount to saying you can't come south unless you want to fight dirty, contaminated."

a conversation with the brigade commander. I said we'll go to MOPP4 and fight dirty. He had his reasons, he said no, he didn't want us to do that. We would have been severely restricted. You have your protective mask on, everything becomes more ponderous and harder to do. You talk through voice emitters; it's not good. He said to go north. I said, "Roger." We had had a commander to commander discussion about what we were going to do, and I was to go north. Now my plan had been to go south, so a lot of flexibility was needed.

In the interim, I had a company team that I had sent north to keep the enemy guessing. I was going to send this team to the south, eventually, once the breach was complete and through the obstacle. I didn't want to send him out to get killed. I wanted him to position himself in the north so the enemy was still somewhat confused about whether we were going north or south. He was already up there so he became my lead element. The company team down south was contaminated. I told him to stay where he was and continue to engage

the enemy. His task and purpose had now changed. His task had been to *destroy* enemy, vicinity of the breach, in order to allow the successful completion of a breach down here. He was the support by fire position. His task now changed to *fix* enemy south of Crash Hill to prevent the enemy from repositioning to the north and influencing our point of penetration that had now shifted to the north. He didn't have a lot of combat power but what combat power he had I told him to keep south.

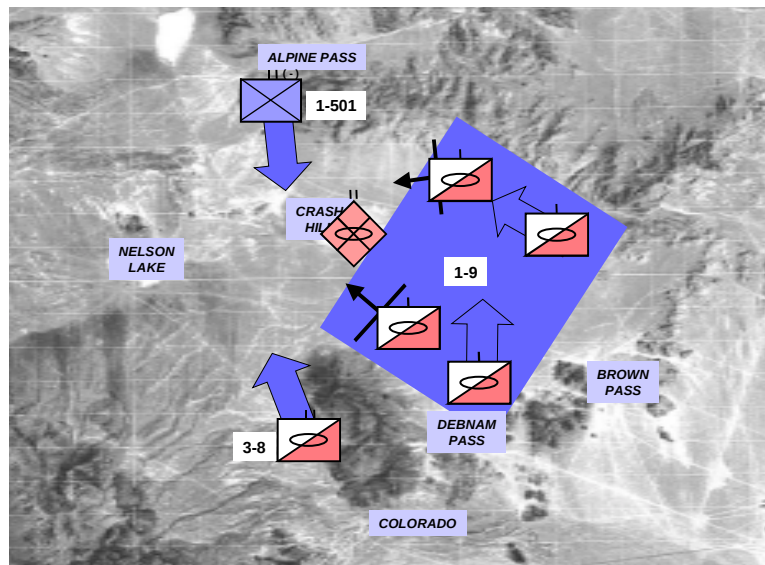


Figure 22. 1-9 CAV Reorients North.

Now I'm having to do some things on the fly. This company team that was going to be my assault force, to come through the breach first, now took the lead because I wanted to have tanks in the lead. He starts working the North Wall. He gets all the way to the wire and he's still alive. And there's hope. Then I bring up my engineers, a great company, Alpha Company from 8th Engineers. They come up. But there's one critical piece missing here which I alluded to earlier, smoke. Obscuration is a critical piece to putting a breach in because a breach operation takes time. If you don't have obscuration, then the breach force is clearly exposed. If there is an obstacle, unless the enemy is stupid, he is going to have it covered by fire. So, whoever is sitting there playing around in the wire or trying to remove mines is going to be under direct fire. So, the only way to protect them is to

destroy the enemy shooting at them or obscure with smoke so they can't see.

We didn't have smoke; smoke is not that flexible. I still said, being the eternal optimist, we can do this. The engineers were being protected somewhat by that lead company team. Unfortunately, the lead company team is slowly but surely being attrited. There's enemy with long-range fires. He's in the defense, so he's stationary. Again, long-range anti-tank fires from a flank at a distance...if you're looking carefully you can see the flash, but it's not like you can see or pick out a vehicle to orient your own fires on. So, he's being attrited. He's also being attrited by formations that are on the south side of Crash Hill. They just peek over the top and are now able to engage him. There are also enemy dismounts tied into the North Wall.

So, he is having some problems. But he is holding his own in as much as he is still a vital combat force. But then, the engineers get up. Now the engineers, like I said, they were great engineers, but they are about as vulnerable as can be once they start doing their job. You have these very slow vehicles that come up. You have MICLICs that lay a mine charge that are on these M60 tank chassis. Very slow. Very slow moving. Like on Monty-Python, someone yells, "Bring forth the holy MICLIC..." And, everybody looks back and here comes the MICLIC, slowly plodding its way to the front.

In theory, it gets up there and shoots this line charge of C4 explosive. Blows it. Massive explosion. You have a lane. Success. Touchdown. Everybody goes through. That only works, again, if you have smoke. Smoke's not there. He gets up there and just before the *last* piece of wire is cut and he's almost through, he dies. He has no more combat power, no more engineers, we can't get through. We have one engineer, one tank, and these guys have tried to reposition here so they can add suppressive fires. I've already tied up one company here. That's it. I don't have any more. We almost make it through but we can't.

"He gets up there and just before the last piece of wire is cut and he's almost through, he dies."

We go back and find out we were going to have a chance to do the mission again. As it turned out, it was a good thing because the second time around we didn't change our plan dramatically. It was a good plan. We were still going to go south. We hadn't had an AAR

or exchange of information, so the OPFOR wouldn't have been sure if we were going north or south. He had only seen us breaching north. The plan, in essence, stayed the same. We still had an attack at the BCT level from three directions, but the light force that had been in the north was now taking some key terrain down in the south to facilitate this breach. The enemy had some infantry that was tied in and we wanted to put our infantry on his, destroy it so I no longer had an exposed flank as I put in my breach. That was the key difference to this plan. Other than that, it was about the same. I was still coming through both passes, et cetera.

We had templated where the enemy's persistent agent was. I said put it on your maps. My guys didn't think he was going to put it in the same place. I didn't care, I had them put it on their maps. Sure enough, he put it and the FASCAM in the same place. This time, I had already gotten the company team through and I said, "MOPP4, now." We fought dirty. And actually only one company team got caught. The others were able to make it around it because we didn't have this big block of terrain to get around. We were very precise as to where the enemy's persistent agent was and we were able to divert to go around. I did have some contamination but not to any great extent.

The fight went about right in as far as we got into support by fire. We got smoke although it was sub-optimal. The place for it to go is not right at the breach. You'd think you'd want it right at the breach, so there is a cloud of smoke while I'm cutting wire and blowing stuff up. No, where you want it is behind, between the enemy and the breach, obscuring the enemy's ability to shoot at you. Got the engineers in there and got the breach and got my assault force through. My tank assault force got through. I was right behind him and they pour through on the far side of the breach and now we are on the objective. What we should have done and it didn't happen, was that we should have set a section of tanks right there. We were on the move, but that's no match for an enemy who is stationary and can calmly pick you out. You want to set two tanks who are scanning to protect the forces coming through. But if everyone is on the move, no one can scan effectively. The lead company team did not set some tanks to scan, so as he was pouring through, the enemy withdrew from the objective off to his max ranges and shoots back in on the objective. My guy is not watching. He is going for the far side of the objective and is not scanning for the enemy. Anyway, he made it on

the objective. He slowly but surely lost all his combat power on the objective from an enemy who had withdrawn. The enemy was upset that we were able to get through their obstacle but I was displeased because we didn't have the combat power we should have on the far side.

All in all a much better fight. I learned from the first iteration that there is something to be said for doing the same mission a second time. The parameters and variables were slightly different. This time I decided I would not be pulled off my point of penetration. He is going to throw persistent and FASCAM on me but I am staying the course because it is harder for me to get through up north than to fight through what he is putting on me in the south.

62. OPFOR Deceived in the Fog

We had a defensive fight, which was a clear win for us. The tactical decisions in that case for me were few. In a defense you really have to decide about the repositioning of a reserve and about repositioning of the actual defense itself. Those were the important decisions I executed.

Our defense was fabulous. We had two days to prepare and we had chosen the point where the enemy would attempt to penetrate. This defense was Central Corridor. We were defending. There were two task forces forward abreast in this defense. I was in the north, 3-8 was in the south. The enemy chose to come north. We believed that he would attempt to penetrate at the Iron Triangle and vicinity 114 Wadi, which is along the North Wall. It's because it is very difficult to get all your fires into that location. If he gets into this wadi, this draw, then you can't shoot him. Once they own that, they just run that thing until it comes out and then they are behind you. It's almost unfair.

"If he gets into this wadi... then you can't shoot him. Once they own that, they just run that thing until it comes out and then they are behind you."

So, he attempts to throw a whole bunch of infantry; he might use Task Force Angel, an air assault formation, or he might use Destroyer. But he will use the infantry to initially seize that key terrain right there and then he will bring forward his forward detachment or his FSE depending on which formation he chooses, and then he will bust through north. And then,

very unimaginative of him, he will take his whole regiment and run them right through that same location. But hey, why should they fool with success? That's what they'll do and have done.

We had time to prepare. I had a light company that was attached to me plus my four companies. I put that light company right there, and said this is where he is coming. These guys were great Americans. They rolled some boulders and stuff to block this thing up and then we put a bunch of mines and there was wire. The engineers had put in all kinds of wire and did a fabulous job. And then the weather intervened.

The day before there was a tremendous fog that came in from the Central Corridor. Incredible, you could see it rolling in. It was like a wall of white; it just covered us. I remember thinking that I hoped it didn't happen the day of the fight because we can't see anything.

"It was like a wall of white. It just covered us... That fog was better than any smokescreen he could have delivered."

Remember, I said obscurity is the key to success when you are attacking a defending enemy? So he wouldn't even have to worry about smoke. That fog was better than any smokescreen he could have delivered.

The day of the fight... The same weather. The fog is as dense as I've ever seen it. Could not see the hand in front of your face. I'm thinking we really have a

problem. But the enemy had a problem too. I was figuring this is his backyard. The enemy knew the terrain but good. It's his sandbox so I figured he wouldn't have a problem navigating. But he did. He had some problems getting around that day. Couldn't see squat. So, he came through the passes and he went north. His plan was to breach the Iron Triangle and run 114 Wadi with the whole regiment. I'm not clairvoyant, that was just a smart thing for him to do and, by golly, that's what he chose to do. He also detected weakness up there because I didn't dig in my company up there. I had a mech company that stayed up there but because of the terrain up there, I didn't even want to dig him in. I wanted to keep them flexible. I dug in some other companies, but not that one.

So, he went for it. He went up there. My light company came out of the hills, shot and killed the first BMPs that were trying to do a breach. The enemy piled on and started to try to breach when all of a sudden they ran into more mines and more obstacles. Then the company team that was up there, they had rehearsed coming forward, popping up.

They just started destroying the enemy. It was a matter of five minutes and the enemy's forward security element was destroyed.

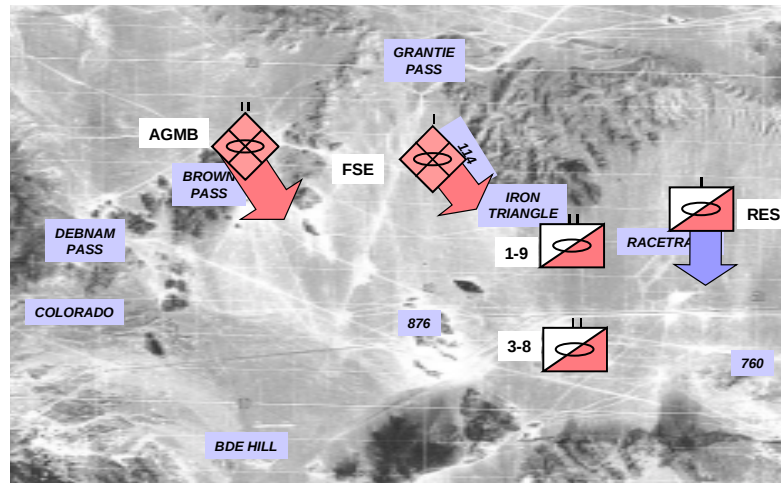


Figure 23. OPFOR FSE Attacks to Iron Triangle.

Now the enemy commander had a dilemma. Does he continue to press the attack to the north and stay on plan or completely change the plan? Hmmm, shoe's on the other foot now. His reports are "Don't come north." His guys on the ground are saying, "They're all over the place! Don't come north." He changes his whole tactical plan and went south. He did that. It was a bad move. He ran right into 3-8 who had a great engagement area down there and they took him out.

My tactical decisions at this point... where to commit. I had a reserve that was uncommitted in the rear. The brigade commander asked if I had stopped the enemy in the north and could he take my reserve? Hard question to answer because you don't know what you don't know. You know that the enemy was up in the north. You know you had this fierce fight and then all of a sudden - nothing. Is this the calm before the storm? Is there going to be another major attack? You don't know. Because of the fog, our intel is so poor that we can't really tell whether the enemy is repositioned yet to the south. I thought we could hold it with what we had; I wouldn't be committing my reserve. So, he took that tank company and ran it to the south and that company was able to contribute to the destruction of the enemy who had now decided to go south. So that was a good thing.

It makes it sound clean. There was some back and forth with that same tank company in the ensuing hours of the fight, but the bottom line

is he was committed south to conduct the fight to the south. The further decisions made were relatively easy ones. I quickly figured out that nothing was coming north and I took everybody I had and sent them to the south. So we had an interesting thing. OC said it normally doesn't happen. The enemy was being engaged from at least three directions and that is typically not what happens. I had a company team in the south. We were able to further drive the enemy to the south after

"The enemy was being engaged from at least three directions."

convincing him to go north. He thought a company team of mine actually belonged to 3-8 in the south by the way

it was positioned. We deceived him into thinking that company team was part of the southern defense. The way he does things is he counts company teams to decide where to commit. That was part of his decision process that drove him to initially go north versus south.

Again, that was a relatively easy fight regarding my command decisions to make. I just had a conversation with the brigade commander as far as whether to allow my reserve... *allow* nothing, he was going to take it. But the question was whether or not I really needed to still use it or did I have a viable defense that I could still hold. Because it would be a bad thing to say, "Yeah, no problem, boss. Take 'em," and then have to say, "Oh noooo! They're coming," and then have to pull them back up north.

LIEUTENANT COLONEL THOMAS R. RUHL, 1999

63. Coalition Forces

This was a hasty attack. We were attacking from the Central Corridor west up through Brown/Debnam up towards Crash Hill. We were scheduled for a 0700 LD, but in February at NTC that is dark, causing us to start movement at about 0430 in the morning. Pitch dark, zero percent illum, raining, couldn't see your hand in front of your face. At the time, we were two mech companies, two tank companies. Just as we were getting into the Brown/Debnam Pass complex, the brigade commander gave us a FRAGO. We were not going to attack north through the Brown/Debnam Pass. We were going to switch and attack south through the Colorado Wadi: a very difficult, challenging, up-and-down place first, to navigate in; second, to fight in.

The plan was shifted because he had gotten some additional information. Our plan heavily relied upon air assets to conduct the attack in the north. We knew it would be a very tough mission. But the weather came in, the clouds were down low. It looked almost like a smokescreen the clouds were so low. The clouds were low and it was raining. We got a call just before the FRAGO came out that we were not going to have air assets to support the attack. It would have been impossible to make the attack work as planned in the north. So, we did a real quick shift hoping to shift quicker than the OPFOR could. But the way the terrain is laid out, as we shifted and tried to go through this rolling terrain, all the OPFOR has to do is move from here to here. They can move twice as quick as we can, based on the terrain they had and what we had.

Also, the brigade commander said he was giving me a coalition force company. My recommendation was I didn't want the coalition force and didn't have time to coordinate with them, because they have identical vehicles to the OPFOR. The only thing different is a panel on the back of their turrets. I said it was too late, we were going to have fratricides. He told me I had to have them and they were coming. I said I would send them forward, well ahead of my task force, and let them try to do some of the breaches and initial work. He said he wanted me tucked up right behind them. I said, okay.

I gave a very quick FRAGO to my commanders along with my S3 and we shifted from the north. It was about 10-12 kilometers to pull out from where we were and swing back into the Colorado Wadis, causing us to also request a 30-minute delay in LD. We just couldn't physically move fast enough with the visibility conditions.

The coalition forces came up on my net as we're starting to do this movement. They said, "We are here," and gave a position which was well in front of us. I said good, continue to move. My lead company starts to turn and they start catching fire from an OPFOR tank. So, they are receiving direct fire from their front. They look off to their left and there are OPFOR vehicles coming at them. So they engage the OPFOR vehicles and destroyed them all in a matter of about a

"So they engage the OPFOR vehicles and destroyed them all in a matter of about a minute."

minute. It was the coalition forces company. They were not where they had said they were. We could not see their panel on the back of their

vehicles, because they were coming at us and the panels were on the back of their vehicles. It led to a very large fratricide. We continued the mission.

The lesson learned is it's hard enough to do operations, especially in limited visibility, but then the additional coordination required for any kind of coalition force mission has got to be very well planned, very well rehearsed. Everybody has to understand it. I had gotten the FRAGO out to the company commanders; they had gotten it to their platoon leaders on their company nets. There had not been time to get it down to the squads and the individual tanks. They were the ones who actually engaged and destroyed the coalition company. It all happened in a matter of about five minutes. We were using radios for the FRAGOs. We got the FRAGO, I gave it to the company commanders. They'd given it to platoon leaders. The platoon leaders were just starting to pick up their handsets to talk to their soldiers, in their tanks and their Bradleys, when the coalition forces came up. So, it all happened very quickly. But the complexities of dealing with coalition type forces is not something you can do on the fly. It leads

"The complexities of dealing with coalition type forces is not something you can do on the fly."

to fratricides.

In addition, with NTC play, the country of Mojavia then sends envoys from their

government to my TOC with letters of complaint to me. Newscasters are there. It was an added distracter on top of the rotation.

As I said, it was pitch dark. We were moving two or three hundred combat vehicles at night in that kind of terrain. It was very slow. Fortunately my S3 was travelling right behind me. So when the brigade commander said a FRAGO was coming, the S3 just hopped in the back of my Bradley with me. As soon as we heard we were getting the Mojavian company, we looked at each other and knew there was a risk for fratricide. The brigade commander was doing the right thing, because he was also given a very short time to make those decisions. It didn't work out as well as it could have.



If you look at it from the perspective of the young company commander who was my lead company, he was receiving direct fire from the front. Positive OPFOR. He had lost a couple of vehicles to it because the OPFOR had pressed well forward of where our probable line of contact was. So we thought we had another 4 or 5 kilometers to move freely, but the OPFOR had in fact pushed elements forward. And we didn't have scout eyes down there to identify that because we had planned on attacking north. So we attacked without scouts in the front. And my lead company makes contact. He's fighting. His guys are fighting. They're scanning. Everybody was scanning left and right. They see OPFOR vehicles. They engage.

I lost a coalition company and most of the lead company because the OPFOR was much farther forward than we had anticipated. We really attacked with three companies instead of five and we still came very close to accomplishing the mission. It was a long fight, six hours. The Colorado Wadi system has real dips up and down but if you tuck in near the base of the mountain, actually in the wadi itself, it's about 50 meters wide, real deep and it runs the whole length. But

it's obstructed all the way and they have enemy vehicles sitting behind each little obstacle to slow you down. As the mission progressed, it became a dismounted fight. Our dismounted infantry just got up and cleared the whole wadi system. We took some losses as we went but it worked out pretty well, at least for us. We were the lead battalion coming through the Colorado Wadi. The other battalion that was part of the brigade swung out left around us. They got right even with us. There was a lot of enemy out there. You can't see from down in the wadi system where I was. They died very quickly. In a matter of about ten minutes, that whole battalion was gone. Part of the stress added to that decision was, normally at NTC you do a mission and then you have 24 hours to plan and prep the next mission. Then the third day you will fight one. We were doing continuous ops; a mission every day. This was about our third straight day of missions. Everybody was exhausted by that point.

A lesson learned for me was the extra planning time for the coalition forces. Had I to do it again, and he gave me the same guidance, I would take an extra five minutes before I started shifting and pushing the battalion south to do two things. One, I would have the coalition forces double check exactly where they were, *a couple of times*, to make sure I had positive and they were positive as to where they were. Second, just take the five minutes to make sure every vehicle in my task force *knew* that coalition forces were coming, where they were at, and what their mission was. I got it to company commanders, they got it to platoon leaders, and that was the last I tracked it. I was trying to race my vehicle and navigate and still talk to my boss. I think that extra five minutes would have saved the whole thing.

LIEUTENANT COLONEL CHRISTOPHER TUCKER, 1998

64. Brute Force and Ignorance

The situation is a brigade attack where my task force was a mech infantry task force. I was the initial brigade main effort to conduct a penetration of an enemy defense and to pass the armor task force through. The attack is from east to west in what is commonly referred to as the Washboard of the National Training Center. The line of departure was Barstow Road and my objective was to penetrate the enemy defenses which ran from Hill 1195 south to the South Wall. The brigade's objective was further to the west towards Hill 1064, out toward the MARS Site. I would penetrate the enemy's defenses and the armor task force would continue on to the objective.

I had a mechanized infantry task force, three mechanized infantry companies and two tank companies. I had been reinforced by the brigade commander. The enemy was in a horseshoe defense in the Washboard from Hill 1160, actually started out at Hill 910 west to Hill 1195, and then south on a straight line down to the South Wall. Our plan was to attack to achieve a penetration near a terrain feature known as Benchmark 999, which is a piece of high ground where I can focus my combat power at where I believe the enemy was defending. My plan was to penetrate there using a mechanized infantry company in the south to focus the enemy's combat power towards the south and make them think I was going to flank them in the south, but actually use the rest of my combat power to penetrate him at that location.

Factors that cause commanders to make decisions are based on knowledge of the enemy, knowledge of friendly, and knowledge of the terrain. And coincidentally they are the basic elements of battle command; see yourself, see the enemy, see the terrain, and see the inter-relationship of the three. I believed that the enemy was in a horseshoe-shaped defense but there was a weakness, it seemed, between two MRCs in the vicinity of Benchmark 999 and that's why I built my plan that way. So, I had what I believed were the enemy locations. The key point here in making my initial decision for the attack was that I was basing it on the enemy template, and therefore, would have to get it confirmed by my reconnaissance either through brigade COLTs or task force scouts. This was our first mission out of

the box. I had all my combat power. All my systems were working. There were no issues with friendly forces. The terrain did not support long-range fires, did not support massing of combat power at point of penetration.

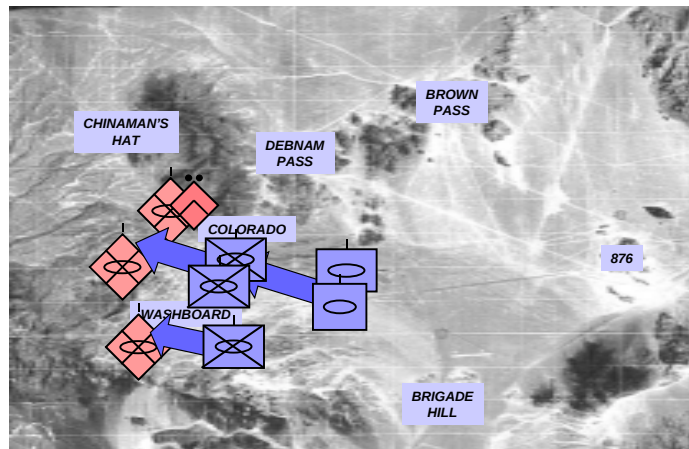


Figure 24. Attacking the MRB in the Washboard.

So one of my decisions was to basically have two company teams lead in the north, a company team in the south as a fixing force, and then two company teams to follow these two lead company teams to destroy the combat power at the point of penetration. I would then use the following two company teams to basically widen the shoulders of the penetration to assist the forward passage of the follow-on task force.

I had a pretty good idea of the terrain, but not perfect. Although I had many rotations and had been on that ground before, I still didn't know where all the turns were and where exactly we would be able to position forces. My first decision was to develop this plan; my intent was for this to be a deliberate attack.

My second decision, not a doctrinal decision point for actual execution, was whether to adjust the plan at about 0500 based on intelligence. We had what we believed were the flanks of the two motorized rifle companies in the vicinity of Benchmark 999 based on reports of my scouts, the Brigade COLTs, and reports we had received through brigade that division intelligence had identified these positions. And so I felt I knew roughly where those two motorized rifle companies were. I did not know about anything in the south, and I was not sure of

the enemy defenses between Hill 1066 and Hill 1195, which is the high ground that runs from Brown/Debnam Pass back to Chinaman's Hat. I didn't know that portion. I felt since I knew where these two motorized rifle companies were, I could still execute my plan the way I had laid it out. My second decision was "no change." This is where I started to run into problems. This eventually led to our problem because I did not have knowledge of the enemy and we knew there were some, by template should be some, between 1066 and 1195. I decided "Hey, I'm going to fight my plan because I think I have a good idea where the enemy is." I totally discounted the enemy in the north. I didn't know where they were. I didn't adjust my scouts. I said "Hey, I know where the two MRCs are, so we are going to attack just the way we planned it out." Higher had little new information beyond some identified dismounted infantry.

This was the first decision that led to a bad outcome. I elected to stay with the plan. This being a deliberate attack, I really did not have an 80% solution on the enemy. I would have been better served, in hindsight, either to go to my higher and request a change of mission or change my plan and conduct this as a movement to contact, leading with an advance guard who could develop the situation. What I could have done at 0500, not having all the information, I could have gone to the brigade commander and said I don't think there is enough information here for me to do a deliberate attack. Recommend that I move to contact, identify the enemy's defenses, and then bring up the rest of my combat power to try to achieve a penetration. Without detailed information on the enemy in the north, I did not have a confirmed fire support plan for the north. I didn't have all the enemy information I needed to conduct a deliberate attack, yet I elected to conduct the deliberate attack anyway. I didn't go to higher and ask for confirmation.

"I didn't have all the enemy information I needed to conduct a deliberate attack, yet I elected to conduct the deliberate attack anyway."

So, at 0630 we attacked, per the plan. Made light contact with enemy security forces. And I thought everything was fine. As we approached Benchmark 999 and started taking direct fires, we identified the enemy positions where we intended to be the point of penetration. However, because of the terrain and because we had not done a good rehearsal

taking terrain into account, the north/south wadi complexes pushed my combat power to the north. As a result, I lost two companies of combat power to the enemy that was between Hill 1066 and Hill 1195.

There was a motorized rifle company reinforced with AT-5s, which have 3 plus kilometers, 3500 meter range. Those anti-tank weapons up in the hills destroyed two of my companies. My other company was destroyed attempting to make the penetration by himself. So I had no mass and no mutual support and I elected to try to continue the attack anyway. As opposed to trying to hold some ground to pass the armor battalion and maybe he could assume my mission, I elected to continue the attack believing I could still achieve a penetration. But when it came right down to it, I only had one company left. That was the third bad decision. After I'd lost two companies of combat power to an enemy force that I had not properly identified, I continued the attack anyway telling my brigade commander that I still think I can get up here and take the ground around Benchmark 999 so he could pass the armor battalion through. By making that decision, I destroyed my entire task force. It lasted about three hours.

The armor battalion was about three kilometers back and the brigade commander attempted to pass them north of me once we'd identified this force, pound it with artillery and smoke and continue the attack. I did not have good information on the enemy on the northern flank. I had no suppressive artillery fires accurately planned on these positions. I had no accurate smoke planned. So, I was reacting to contact with the enemy between Hill 1066 and 1195 at the same time that I'm in contact to my front. As a result, the enemy forced me to fight in two directions and he was fighting in one direction (south). I was trying to fix this decision now by adjusting artillery and smoke on the move against an enemy force that I don't have an accurate picture of and at the same time trying to continue the attack. At this point, what I should have done is recommend to my brigade commander that I go to a hasty defense and focus what combat power I have left to identify the force in the north, so he could then focus his artillery fires and smoke to support the attack of the armor task force.

"I was ... adjusting artillery and smoke on the move against an enemy force that I don't have an accurate picture of and at the same time trying to continue the attack."

The third bad decision was to continue the attack with "brute force and ignorance," like the Scorpion Team motto, thinking we will

eventually bull our way through. We never did. We lost the entire task force. The battalion behind me achieved a penetration of about one kilometer before they were rendered combat ineffective. Without detailed intelligence from us, the brigade never had a good read on this force. We could never get them pinned down in such a way to allow the armor battalion to pass through.

The brigade intelligence officer believed the enemy would be defending in a horseshoe defense, but we felt the predominance of this combat power would be down in the valley floor. I discounted the enemy's effective use of the AT-5 anti-tank guided missile launcher, which is common knowledge at the NTC. They are very effective with the AT-5.

The decisions that led to the outcome: my intelligence update decision at 0500 to go with what we had and continue with the attack; and the second decision was this business of continuing to try to achieve this penetration, when in fact I still did not have a good idea of the enemy's positions along the 1066 and 1195 ridge. Rather than stop, get my scouts into position, and get my infantry into position to take this guy out, I elected to continue the attack. That decision ultimately caused the brigade commander to do the same thing, pass the armor task force in behind me. Basically, the brigade got defeated in detail.

An underlying action that contributed to the bad decision and poor outcome is a poor focus by me to my scout platoon leader. During the planning and preparation phase, I did not properly focus the guidance to my scout platoon leader. "Go out there and find the enemy," is not good enough guidance for a scout platoon leader. We did not focus him on specific named areas of interest where

"Go out there and find the enemy,' is not good enough guidance for a scout platoon leader."

he could confirm or deny the enemy's defenses. I did not take into account, nor did I give him guidance to put very many scouts along, the 1066/1195 ridge. As a result, I didn't have a lot of eyes up there. We attacked at 0630 in September and it was fairly light. We could have, with reconnaissance in better positions, identified them as we made our approach march. But we didn't.

The lessons here I learned as a battalion commander in decision making at the NTC is first, I must know the enemy as well as an intelligence officer does. That probably will never happen but I have to

have an intimate knowledge of the enemy, so I can give the best guidance possible to my maneuver commanders. Second, the knowledge of the enemy will allow me to focus my scout platoon; which I never, in my entire rotation as battalion commander, never got in the right place at the right time. Third, with a good knowledge of the enemy and good use of reconnaissance, I can adjust. At an intelligence update early in the morning, prior to battle, take the time to make a decision to change the plan or take the time to change portions of the plan.

I had a battle later where I did have a good read on the enemy when the battle began, and then the enemy repositioned. As a result of my not continuing to follow the enemy during the battle, when it came time to employ artillery and smoke, I could never get it in the right place. Knowledge of the enemy and use of the reconnaissance assets before and *during* the fight allows the task force commander to bring additional combat multipliers that will support his ultimate decision of what he does with maneuver. I never did do that very well.

65. S3 on the Battlefield

This situation is brigade live fire attack, training day 13, the last training day of the rotation. Brigade concept of the operation is the armor task force with three infantry companies and two tank companies attacking in the north in what is commonly referred to as Drinkwater Valley. That is the area from about the 424325 grid square across the Drinkwater Valley out towards Leach Lake Passes. It is the northern live fire corridor of the NTC. The armor task force was to attack there to achieve a penetration.

My task force was organized with one mechanized company, one tank company, and one engineer company. I was attacking in the south from Brown Pass to Hill 1203. My objective was Objective Bengal. My mission was to conduct a supporting attack in the south against a motorized rifle company defending Gary Owen Impact Area in the northwest corner of the military reservation. The brigade commander's intent was to conduct a penetration in the north through those two passes to cause the enemy to orient its combat power there. Then I would conduct a supporting attack to take the southern objective so then the brigade would own enough ground. The brigade's overall mission was to pass another force through.

The first decision I made was to develop a plan for the use of a mech company team, a tank company team and an engineer company. The brigade commander held out one tank company in reserve. Given my limited combat power, our plan was to initially fix the enemy, get him to fire on us to support the brigade commander's intent, and then mass the battalion's combat power against one motorized rifle platoon in order to take the objective. The enemy was defending kind of in a two up, one back formation. The terrain is such that there is really only one way to get onto the objective, through a narrow pass just north of Hill 1203.

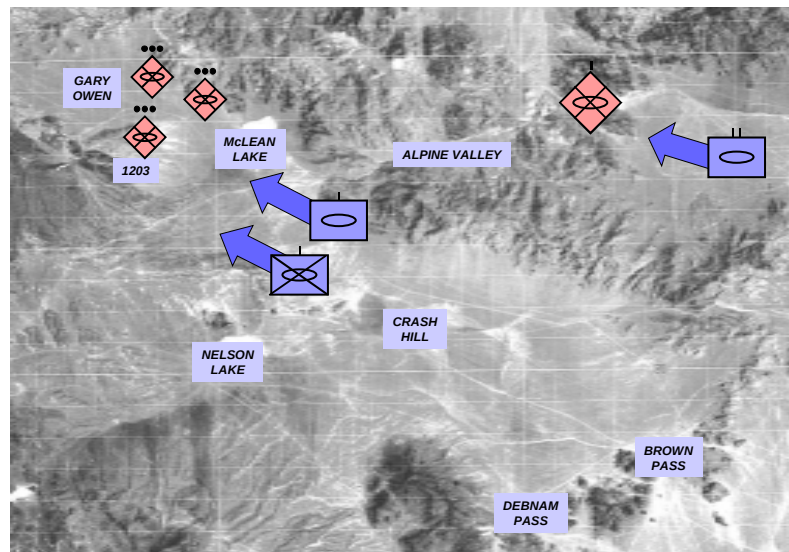


Figure 25. Attacking the MRC at Gary Owen.

Terrain features along the way are C130 Hill or Crash Hill. The major terrain feature that divided the armor battalion from the mech battalion is the Granite Mountains. My initial plan was to move forward two company teams abreast to get the enemy commander to fire on me and allow the brigade commander to attack with the main effort in the north, the armor task force. Then, once he shifted the effort to the south, the original plan was to attack the enemy from south to north, and to destroy the southern motorized rifle platoon and the center motorized rifle platoon, and then the northern motorized rifle platoon.

The brigade commander thought that was also the best place to achieve a penetration and destroy that company. The other reason was to take enemy into account based on how he was defending. We took terrain into account and I felt I could secure Hill 1203, then use that to protect my left flank and attack from south to north to destroy the enemy force. Friendly factors affecting my initial decision were that I only had one mech, tank, and engineer company, not a lot of combat power. The brigade reserve was going to be kept way back in the fight. As a result of making this decision, I built my reconnaissance and surveillance plan with NAIs on the enemy platoons and I built my artillery and smoke plan based on attacking from south to north.

My second decision. At about 0500 I walked into the TOC. I did have scouts in good positions. They had a pretty good idea where the enemy was and it was only a motorized rifle company, three platoons. I have a good idea where they are. I've got an artillery and smoke plan that is pretty close to where I want the enemy and believe the enemy is. I have confirmed that, and have scouts in the right position. I know where the enemy is. The terrain is good high ground in the south, high ground in the north. I felt like I could get in there and make the attack.

"My artillery and smoke plan was just a little bit off. At 0500 I said it was close enough. It really wasn't close enough."

My intelligence update confirmed my decision to continue the attack south to north. The one

thing I failed to do at my second decision was to specifically adjust my artillery and smoke plan on the grids my scout platoon leader had given my intelligence officer. I stayed with my maneuver plan, but in hindsight my artillery and smoke plan was just a little bit off. At 0500 I said it was close enough. It really wasn't close enough.

The decision was to stick with the plan. This time I've learned my lesson from two weeks before. I have reconnaissance in. I have a good idea where the enemy is. The terrain supports me attacking from south to north. And the terrain out in front of the enemy position is all open. So, that'll work.

At 0600 we attacked. Got into position. The enemy fired some artillery at us, got him focused on us. Brigade attacked. Went up in the north. The brigade commander's big decision was that he had committed the reserve armor company to the north. So as a result, we ended up with three tank companies and three mechanized companies in the

north. The brigade commander told me I had to continue my mission with the combat power I had been allocated; one mech company, one tank company, and one engineer company. The brigade attack was successful, although the armor task force was destroyed in the north. The brigade commander told me we still have to take the southern objective. I have to do it with what I have.

So, we continued the attack. We had an artillery prep and close air support go in on the southern motorized rifle platoon, which was fairly successful based on the reports of my scouts. As I said earlier, I had not adjusted my smoke plan. So, when I called for smoke it was off target. My artillery was not quite on target. What destroyed the southern motorized rifle platoon was a combination of artillery and close air support. The smoke was not right where I wanted it and we tried to adjust the smoke. The artillery wasn't landing exactly where I wanted it to, but the reports from close air were that we were getting some battlefield effects. We see secondary explosions and we think we have either destroyed or rendered the southern motorized rifle platoon combat ineffective.

We continued the attack. We had a pretty good knowledge of the enemy and terrain. Friendly forces... I only had a limited amount of combat power for this fight. I am going to stay down in the south. We began to move toward the south and the two enemy northern platoons shifted. The true positions were a little further forward than we thought they were. As I began to maneuver my mech and tank company forward, with the engineer company in back, I started taking flanking fires from these two platoons. My S3 got into a position where he could

"My S3 got into a position where he could see this whole area...and reported to me that if we would adjust our scheme of maneuver the center platoon would be out of range and we could maneuver around the dry lake bed."

see the whole area. It's a bowl, Gary Owen Impact Area, behind these two terrain features. He moved north of McLean Lake, and reported to me that if we would adjust our scheme of maneuver, the center platoon would be out of range and we could maneuver around the dry lakebed using the northern ridgeline for protection.

We could fight one platoon at a time because he could see the targets and they were oriented to the south and to the east. He called me

and said if we maneuver to the north, we'll only have to fight one platoon in the north, then the platoon in the center. The platoon in the center couldn't shoot around this corner but he could shoot out into the area we were moving toward. Based on my S3's report of the enemy, his knowledge of the terrain, and the limited amount of friendly forces - I couldn't afford to take very many losses - I made the decision to take a tank company, followed by the engineer company, north around this dry lakebed. I used the mechanized infantry company to establish a support by fire on the south side of the dry lake bed to fix the northern motorized rifle platoon and thereby enable the tank company to get into a support by fire position. I then bring the engineers forward to breach the obstacle, which was a complex wire mine tank ditch.

The other thing that helped me make this decision was my own personal knowledge of the terrain. Eight and a half years before, I had seen another unit make this similar move. As we began to move, it came back to me that because of the shape of the terrain, the tank company and the engineers would be protected as long as we could keep the platoon to the north fixed. The decision here was supported by my battalion operations officer based on his vision of the terrain and the enemy and his relaying that back to me. We changed the plan. So instead of attacking in the south, which the brigade wanted me to do, we attacked in the north. We made that decision on the move based on the enemy's initial effects and his direct fire weapons, and our read of the terrain and his position. When we changed the plan to attack to the north, most of my fire support plan went out the window. As a result, we had to call grid missions for smoke and artillery to attempt to suppress these two platoons.

The lesson learned from a late decision is that when you have the possibility of either attacking in the south or in the north, you have to have your fire support officer at least think through what happens if we

"I had not talked about contingencies during my planning process. As a result, it took a very long time for the artillery and smoke to get shifted."

can't go in the south, should we have to go on a branch plan to attack in the north. We had never talked about that. I had not talked about contingencies

during my planning process. As a result, it took a very long time for the artillery and smoke to get shifted. Ultimately they never did. I could never get smoke exactly where I wanted it. We went to a field expedient

means of calling in airburst smoke and HE on the ground. The combination of dust in the desert and the smoke provided enough obscurity so I could bring the engineers in, fire the MICLIC, open the minefield, bring ACEs forward, plow the tank ditch, and we were ultimately able to get on the objective. We destroyed the entire motorized rifle company and I still had basically half of the mech, tank, and engineer company left at the end.

The decision here was on my S3. He was on the other avenue of approach and he reported to me. Based on his vision of the terrain and the enemy, and based on the advantages of the terrain in the north and the enemy's inability to put direct fire effects along the route that went around the dry lake bed, I made the decision to go north. Although we did not have a contingency plan as part of our task force operation, he and I had talked about other options, and that's why I had him move along the northern avenue of approach.

The key things that led to success on this decision were: one, using the battalion task force operations officer, my S3 to move on another avenue of approach; two, we ensured he had the commander's visualization of the battlefield. He knew what I wanted to achieve. Whether it was in the north or south, it doesn't make any difference. He knew what I wanted to have happen. So, when he got into a position where he could see the enemy and the terrain and the positioning of the friendly forces, he was the one who said the enemy is not in a position to orient their fires this way. The terrain will protect our right flank all the way around the dry lake bed. If you continue in the south, he will shoot you up. And so we made the decision to go north.

66. Battle Command Team

One of the things that causes commanders to make wrong decisions is our gap in information about the enemy. The more we know about the enemy, the better decisions we can make. That's a *yeah, no kidding*. What that means in training is that commanders must pay their main effort in their planning process to the development of intelligence and information about the enemy. The lesson has been learned for years at the National Training Center – Battalion Commander, you can't leave the planning of task and purpose of your scout platoon's mission to the battalion S2. I've seen that time and time again. It's the S3, the S2, and the Scout Platoon Leader. I believe that as soon as you get that warning order from brigade and you do some

initial mission analysis: the S2, with an initial template, and the commander, because he is the most experienced guy there. The commander, doing his commander's estimate, then says very, very early, here are my PIR and here's what the scout platoon *must* find out. I believe the commander has to be personally involved in planning the scouts. It can't be, "Hey, I'm going to eat an MRE, you two guys plan it all out." It has to be more than just saying, what I typically saw and what I did, "Scouts, I want to know where the enemy is here and here. OK?" The scout platoon leader in an infantry or armor battalion is a great 1st lieutenant. He's one of your hoooah, hard charging guys, wants to impress the boss, be a hero. "Roger sir," he's out there. I call it blind aggression. We're running out there searching for the glory and often the scouts find themselves dead and don't have impact on the outcome of the battle.

"The scout platoon leader in an infantry or armor battalion is... one of your hoooah, hard charging guys, wants to impress the boss, be a hero. 'Roger sir,' he's out there. I call it blind aggression."

The other factors that I think affect decision making that we don't use enough of are the battalion S3 and the battalion TOC. I think that the Battalion Tactical Operations Center is often left in the dust and most units have the battalion XO at that location; the guy who is probably the next most senior guy on the battlefield, by experience. So, if you are attacking and you have the S3 on an avenue of approach and the commander on an avenue of approach, all of that information, coming back in and being filtered, is back in the TOC. And the TOC is not necessarily under attack. They're not running at a hundred miles an hour with guys shooting at them. They can be listening first and then thinking. The battalion XO can then come up on the net, "Hey sir, haven't heard anything from Scout Six in some time, I recommend you slow down, don't cross phase line X until we're sure I've got artillery in position, smoke's ready to be fired," et cetera.

The XO is that guy who can be that little voice in the back of the battalion commander's head saying, "I think you ought to do this, have you considered that," and so on. Because for an infantry or armor battalion commander, you're fighting from the turret of your combat vehicle. You have what I call the rocking syndrome. You're bouncing around in the desert, you're trying to hold on to your map board, you're

trying to hold on to your hand sets. You're being shot at. It's hard as heck to listen to everything and make the right decision.

"The TOC is not necessarily under attack, they're not running at a hundred miles an hour with guys shooting at them. They can be listening first and then thinking."

We talk in our doctrine about the S3 being with the supporting effort. I feel the S3 needs to be your eyes on another location on the battlefield. Supporting effort or main effort is immaterial but his eyes need to be somewhere on the battlefield to give you that different look. That different look in live fire led to our success. There are a lot of units where the S3 and the commander move near each other so they can be each other's wingman but that leads to the two senior field commanders on the battlefield now having the same picture of the battlefield. May not necessarily be a good idea.



And the other guy is the executive officer. He has to be big brother. The XO in the TOC, tracking the map, has to be like the analyst at the NTC Star Wars building. He has to be watching the whole battle to get the mental picture based on what the S2 is telling him about the enemy and about what he hears about the friendly. He has to listen. He has to do some analysis. The most important thing he can do for the commander to help with the decision making process is provide

recommendations. There are a lot of XOs out there that carry all that information in and "Hooah, Sir! You're doing great. Keep it up." But it's a more active role for the XO. The guy who truly synchronizes combat power at the task force is the battalion XO. He is in a place that is fairly dry and fairly not under stress and has a battle staff with him who can help him. The battalion commander has a Bradley or a tank or a HMMWV and generally he doesn't have all those guys around him. I do not advocate putting the battalion S2 or the FSO in the back of the commander's Bradley. They won't see anything from there. They're in the back of that armored vehicle, bouncing around, trying to look at a map.

Index

- 114 Wadi, 225, 226
- AAR (after action review), 32,
70, 93, 150, 160, 162, 172,
174, 185, 188, 205, 223
- ABE (assistant brigade engineer),
31, 112, 199
- ABF (attack by fire), 99, 101,
134, 136, 137, 138, 142
- Abrams, Gen. Creighton W., 35
- ACA (airspace coordination
area), 34
- ACE (armored combat
earthmover), 116, 243
- ADA, 137, 166, 168, 171, 198
- advance guard (BLUEFOR), 37,
38, 153, 175, 208, 209, 210,
211, 212, 214, 216, 235
- AFATDS (advanced field
artillery tactical data system),
181
- AGMB (advance guard main
body), 29, 37, 38, 47, 69, 105,
106, 107, 119, 120, 134, 153,
185, 207, 208, 211, 212, 213,
214, 215, 216
- Alpha-Bravo Passes, 4, 33, 52,
137, 141, 203
- ambiguity, 26, 27, 169
- AMPS (aviation movement
planning system), 31
- analog, 165, 167, 168, 169, 175,
179, 180, 181, 182
- analysis, 33, 69, 74, 77, 84, 86,
88, 111, 112, 118, 119, 120,
122, 125, 134, 135, 146, 244,
245
- Apache, 81, 83, 87, 88, 89, 90,
91, 92, 93, 133, 135, 136, 139,
172, 173, 185, 190, 191
- Applique, 179, 180, 181, *See also*
FBCB2.
- Arrowhead, 3, 31
- art, 1, 2, 15, 16, 18, 19, 23, 195
- artillery, 8, 12, 16, 18, 20, 21, 26,
33, 34, 35, 38, 46, 49, 54, 56,
66, 67, 86, 87, 89, 92, 97, 100,
101, 104, 105, 106, 112, 113,
117, 123, 124, 127, 129, 136,
141, 142, 150, 159, 161, 162,
165, 168, 169, 171, 177, 180,
181, 188, 189, 195, 196, 200,
219, 236, 238, 240, 241, 242,
244
- ASAS (all source analysis
system), 165, 167, 180, 181,
196
- assessment, 31, 32, 44, 55, 82,
95, 96, 97, 102, 103, 105, 108,
109, 111, 112, 113, 114, 119,
123, 148, 149, 157
- AT-5 - 52, 70, 85, 102, 119, 123,
152, 153, 154, 210, 212, 213,
214, 215, 236, 237
- ATCCS (army tactical command
and control system), 178, 179,
180, 181
- backbrief, 46, 48, 82, 93
- Barstow Road, 4, 46, 54, 183,
233
- Basalt Hill, 4, 118
- battle command, 1, 2, 11, 13, 16,
17, 18, 19, 21, 22, 23, 49, 52,
53, 54, 61, 62, 64, 69, 109,
147, 149, 163, 233, 243
- BCT (brigade combat team), 49,
50, 51, 61, 67, 70, 72, 85, 89,
98, 103, 121, 112, 113, 115,
120, 122, 128, 143, 199, 202,
217, 224

BCTP (battle command training program), 20, 191
 BDA (battle damage assessment), 35, 173
 Benchmark 999 - 233, 234, 235, 236
 Bicycle Lake (Bike Lake), 4, 5, 100, 125, 136
 Blackhawk, 81, 87, 133, 134, 142, *See also* UH60.
 BMP, 60, 69, 70, 71, 80, 165, 172, 185, 186, 197, 226
 boresight, 8, 190
 BOS (battlefield operating system), 152, 181
 BP (battle position), 40, 118, 119, 120, 131, 134
 BRDM, 69, 71, 80, 186, 197
 breach, 7, 8, 9, 14, 44, 55, 56, 57, 66, 67, 81, 82, 83, 84, 85, 99, 103, 114, 123, 125, 126, 127, 128, 129, 130, 131, 143, 146, 203, 204, 205, 219, 220, 221, 222, 224, 226, 229, 242
 Brigade Hill, 4, 5, 118, 125, 135, 136
 brigade engineer, 202
 Brown Pass, 3, 4, 9, 39, 40, 52, 56, 57, 58, 59, 76, 77, 104, 118, 119, 122, 126, 136, 159, 207, 209, 211, 214, 218, 220, 229, 235, 238
 BRT (brigade reconnaissance troop), 54
 Bruno Escarpment, 3, 4, 77, 78

 C2 (command and control), 16, 22, 41, 76, 113, 115, 130, 153, 156, 185, 201, 202, 204, 215, 219
 CAR (combined arms reserve), 57, 61, 131, 132, 140, 141, 142
 CAS (close air support), 17, 18, 20, 21, 38, 46, 61, 123, 126, 127, 142, 172, 175, 188, 200, 241
 CBS (corps battle simulation), 173, 179
 CCIR (commander's critical information requirements), 53, 79, 137
 CCTT (close combat tactical trainer), 20, 36, 153, 194
 Central Corridor, 4, 20, 29, 37, 39, 54, 56, 72, 73, 87, 90, 91, 92, 97, 98, 104, 118, 124, 125, 126, 140, 141, 142, 183, 184, 204, 207, 213, 220, 225, 226, 229
 chemical, 46, 55, 56, 71, 91, 123, 129, 142, 148, 150, 184, 204, 220, 221
 China Lake, 133
 CHOD (Chief of Defense) Hill, 4, 145, 147, 205
 coalition force, 60, 61, 229, 230, 231, 232
 Cobra, 83, 137
 Colorado Wadi, 4, 39, 77, 99, 107, 118, 119, 126, 140, 141, 208, 218, 229, 230, 231
 COLT (combat observation and lasing team), 33, 46, 90, 130, 233, 234
 Comanche, 75, 168, 172, 173
 combat multipliers, 38, 41, 238
 Common Ground Station, 196
 communication, 76, 77, 83, 90, 132
 communications, 76, 77, 78, 79, 88, 101, 104, 156, 183, 188, 191, 196, 210
 company commander, 7, 8, 14, 17, 31, 36, 46, 48, 60, 97, 105, 111, 118, 129, 130, 131, 136, 137, 139, 145, 146, 147, 203, 212, 230, 231, 232
 constructive simulation, 19, 20
 contingency, 39, 122, 243

- counterattack, 47, 61, 102, 173
- counterbattery, 104, 161
- countermobility, 115, 118, 126
- counter-reconnaissance, 33, 80, 99, 127
- course of action, 10, 33, 37, 38, 39, 40, 57, 69, 71, 77, 93, 121, 122, 127, 146, 209
- course of action analysis, 33, 77
- CP (command post), 22, 48, 58, 60, 62, 111, 148, 200
- CPX (command post exercise), 18, 97, 109
- Crash Hill (C130 Hill), 4, 9, 56, 57, 58, 60, 61, 107, 119, 150, 152, 218, 220, 222, 223, 229, 239
- cross-attachment, 65
- cross-talk, 97, 150, 151, 156
- CRP (combat reconnaissance patrol), 16, 33, 61, 69, 70, 105, 107, 161
- Crusader, 75
- CSOP (combat security outpost), 124, 127, 128, 131
- DAWE (digital advanced warfighting experiment), 120, 169, 170, 171
- DDMP (deliberate decision making process), 121
- Debnam Pass, 4, 9, 39, 56, 57, 58, 59, 76, 77, 103, 118, 126, 136, 206, 211, 212, 213, 214, 218, 219, 220, 229, 235
- deception, 25, 26, 27, 228
- decision-making, 1, 12, 15, 16, 17, 22, 23, 30, 32, 36, 40, 41, 43, 51, 52, 53, 54, 55, 56, 59, 60, 61, 62, 65, 66, 67, 72, 73, 74, 76, 92, 95, 96, 97, 99, 100, 103, 112, 113, 115, 120, 121, 135, 137, 149, 160, 161, 172, 188, 192, 200, 208, 209, 211, 212, 213, 214, 216, 217, 220, 225, 227, 228, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 242, 243, 244, 245
- defense in sector, 7, 39, 72, 74, 114, 115, 120, 126, 127
- Defense of Duffer's Drift*, 186, 197
- deliberate attack, 32, 76, 113, 114, 150, 203, 217, 234, 235
- Desert Storm, 89, 177, 193
- digital, 49, 65, 72, 75, 76, 77, 79, 89, 90, 165, 169, 176, 179, 180, 181, 200
- direct fire, 21, 38, 46, 47, 55, 61, 74, 121, 113, 114, 147, 151, 157, 161, 169, 194, 199, 214, 220, 222, 230, 231, 235, 242, 243
- dismounted infantry, 7, 8, 9, 39, 52, 56, 58, 60, 84, 131, 132, 151, 183, 187, 223, 232, 235
- Division AWE (Division Advanced Warfighter Exercise in support of Digital Advanced Warfighting Experiment [DAWE]), 49, 75, 120, 169, 170, 171, 177 *See also* Warfighter.
- Division Hill, 123, 128, 208 *See also* Hill 876.
- doctrine, 1, 11, 15, 19, 22, 47, 48, 73, 182, 207, 245
- Drinkwater Lake, 3, 31, 203
- Drinkwater Valley, 3, 33, 39, 40, 183, 238
- DRT (dismounted reconnaissance team), 80, 187
- EA (engagement area), 35, 40, 46, 47, 115, 116, 117, 134, 138, 139, 140, 145, 148, 160, 162, 166, 227
- East Gate, 133, 140, 187
- East Range Road, 3, 4, 43, 148

EBA (engineer battle analysis), 119, 120
 Echo Valley, 3, 40, 183, 184, 185, 203
 economy of force, 7, 51, 140
 Eisenhower, Gen. Dwight D., 35
 engineer, 7, 8, 14, 25, 49, 55, 67, 82, 90, 111, 112, 113, 114, 115, 116, 117, 118, 119, 123, 124, 125, 126, 128, 129, 130, 132, 145, 146, 147, 152, 153, 185, 199, 202, 203, 204, 205, 219, 222, 223, 224, 226, 238, 239, 240, 241, 242, 243
 EPLRS (enhanced position location reporting system), 22, 123
 ERI (engineer restructuring initiative battalion), 113
 Euphrates River, 176
 EW (electronic warfare), 21
 EXFOR (Experimental Force), 176, 177
 experience, 1, 2, 12, 18, 19, 20, 21, 30, 36, 62, 64, 66, 82, 89, 97, 113, 117, 121, 135, 157, 162, 182, 186, 201, 244
 "eyes," 31, 33, 52, 69, 74, 80, 100, 101, 127, 130, 134, 136, 161, 162, 168, 169, 187, 200, 212, 231, 237, *See also* observer.

 FAC (forward air controller), 33, 35
 FARP (forward arming and refuel point), 80, 84, 133, 142, 165, 186, 187
 FASCAM (family of scatterable mines), 38, 39, 57, 71, 103, 105, 122, 125, 126, 129, 131, 159, 160, 161, 162, 220, 221, 224, 225, *See also* scatterable mines.

 FBCB2 (Force XXI battle command brigade & below), 123, 181
 feint, 25, 26, 96, 97, 119
 fire support, 114, 235, 242
 fix, 37, 38, 54, 92, 101, 102, 119, 124, 125, 141, 142, 155, 184, 222, 234, 239, 242
 flank, 8, 9, 10, 25, 26, 31, 37, 47, 48, 60, 79, 80, 99, 119, 122, 123, 125, 134, 136, 141, 149, 152, 154, 156, 168, 172, 176, 179, 181, 184, 204, 211, 215, 218, 223, 224, 233, 234, 236, 240, 241, 243
 FLIR (forward looking infrared radar), 31
 FLOT (forward line of own troops), 57
 fog of war, 90, 199
 Force XXI, 31, 45, 49, 72, 73, 74, 75, 76, 120, 135, 199
 force on force, 54, 69, 89, 90, 145, 150, 159, 194, 195, 196
 Fox, 150, 221
 FRAGO (fragmentary order), 13, 58, 59, 62, 63, 100, 229, 230, 231
 fratricide, 61, 75, 84, 88, 89, 90, 183, 229, 230, 231
 friction, 2, 14, 20, 60, 61
 FSCOORD (fire support coordinator), 64, 67, 87, 161, 162, 201
 FSE (forward security element), 16, 29, 37, 69, 120, 153, 161, 207, 208, 209, 210, 211, 212, 214, 215, 216, 225
 FSO (fire support officer), 31, 152, 242
 Furlong Ridge, 5, 43, 100, 128, 130, 131, 132

 Gary Owen Impact Area, 238, 239, 241

- Goat Trail, 4, 107, 108, 126
- GPS (global positioning system), 45
- Granite Mountains, 57, 239
- Granite Pass, 3, 4, 45, 46, 54, 55, 141, 207
- Grant, Gen. Ulysses S., 48
- graphics, 38, 60, 89, 106, 120

- HE (high explosive), 66, 243
- Heilbronn, 171, 172, 173, 175, 176
- Hellfire, 33, 35, 90, 136, 138, 168
- HEMTT (heavy expanded mobility tactical truck), 45
- HET (heavy equipment transporter), 45
- Hidden Valley, 4, 5, 39, 45, 185
- Hill 466 - 70
- Hill 720 - 5, 97, 98, 102, 207
- Hill 760 - 4, 5, 125, 185, 187
- Hill 780 - 4, 45, 153, 185, 193
- Hill 781 - 5, 7, 130
- Hill 876 - 3, 4, 29, 45, 54, 104, 105, 107, 123, 145, 153, 185, 208, 213 *See also* Division Hill
- Hill 910 - 3, 4, 126, 233
- Hill 1064 - 233
- Hill 1066 - 235, 236, 237
- Hill 1195 - 233, 235, 236, 237
- Hill 1203 - 238, 239, 240
- home station, 37, 69, 71, 79, 80, 114, 115, 130, 194
- Hornet, 199, 200

- ICO (intelligent combat outpost), 199, *See also* Raptor.
- illumination, 84, 88, 89, 229
- information, 12, 13, 14, 16, 17, 43, 53, 54, 72, 78, 79, 92, 95, 96, 97, 103, 107, 112, 120, 130, 134, 135, 137, 143, 150, 155, 156, 161, 165, 175, 177, 178, 180, 181, 182, 191, 192, 197, 209, 224, 229, 235, 236, 243, 244, 246
- information requirements, 12, 53, 79
- intelligence, 13, 19, 53, 69, 134, 135, 140, 149, 165, 203, 211, 212, 216, 217, 227, 234, 237, 238, 240, 242
- intent, 17, 19, 33, 46, 50, 60, 63, 78, 85, 90, 91, 93, 99, 101, 102, 106, 113, 115, 121, 127, 143, 145, 146, 147, 149, 150, 194, 207, 209, 211, 218, 219, 220, 234, 238, 239
- intuition, 29, 30, 31
- IPB (intelligence preparation of the battlefield), 85, 111, 112, 119
- Iraq, 176
- Iron Triangle, 3, 4, 29, 45, 46, 104, 108, 184, 185, 207, 225, 226, 227
- IV lines (inter-visibility lines), 105, 123
- Janus simulation, 36, 49, 97, 112, 115
- Javelin, 111
- John Wayne Foothills, 5, 70, 131
- John Wayne Pass, 5, 39
- JSTARS (joint surveillance target attack radar system), 72, 73, 84, 85, 88, 90, 91, 134, 165, 166, 167, 168, 171, 172, 173, 180, 181, 195, 196, 199

- Kiowa, 31, 33, 34, 35, 81, 83, 91, 93, 136, 140, 165
- KVT (Krasnovian Variant Tank), 141

- LD (line of departure), 14, 60, 80, 88, 99, 100, 103, 105, 114, 121, 122, 229, 230
- Leach Lake, 3, 33, 41, 238
- linear, 73, 126

live fire, 3, 31, 33, 66, 89, 90,
138, 139, 161, 186, 190, 194,
195, 196, 203, 238, 245

LNO (liaison officer), 64, 81,
186, 189

LTP (leader training program), 49

LZ, 57, 58

Mannheim, 175

map, 9, 11, 20, 45, 64, 84, 89, 96,
117, 140, 142, 145, 150, 157,
179, 180, 182, 189, 192, 244,
245

mass, 9, 21, 25, 32, 33, 36, 38,
39, 40, 41, 50, 54, 55, 72, 101,
127, 143, 169, 170, 182, 208,
214, 219, 220, 221, 236, 239

Matterhorn, 4, 118, 150

McLean Lake, 241

MCS (maneuver control system),
180, 181

MDMP (military decision making
process), 36

METL (mission essential task
list), 188

METT-T (mission, enemy,
terrain, troops, and time
available), 113

MICLIC (mine-clearing line
charge), 66, 67, 126, 129, 132,
223, 243

MILES (multiple integrated laser
engagement system), 9, 85, 90,
141, 191

mission analysis, 69, 74, 86, 119,
120, 122, 134, 135, 146, 244, 245

MLRS (multiple launch rocket
system), 49, 90, 91, 136, 159,
165, 168, 171, 172, 182, 194

momentum, 32, 35, 154, 207,
209, 211, 216

MOPMS (modular packed mine
system), 111, 126

MOPP (mission oriented
protective posture), 55, 148,
221, 224

motorized rifle platoon, 239, 241,
242

movement to contact, 29, 32, 37,
38, 60, 69, 70, 79, 104, 109,
114, 120, 122, 123, 124, 127,
129, 135, 155, 190, 207, 209,
215, 235

MRB (motorized rifle battalion),
7, 8, 9, 30, 57, 132, 184, 218

MRC (motorized rifle company),
185, 234, 235, 236, 238, 240,
243

MTI (moving target indicator),
175

mutual support, 166, 167, 168,
169, 190, 236

NAI (named area of interest), 34,
74, 198, 237, 240

Napoleon, 21, 35

Neckar River, 75, 172, 173, 174

Nelson Lake, 119, 134, 138

Northern Corridor, 3, 29, 31, 33,
51, 77, 87, 140, 141

North Wall, 52, 58, 107, 108,
109, 118, 126, 145, 154, 184,
185, 192, 220, 222, 223, 225

Objective Texas, 207, 208, 211,
212

obscuration, 58, 66, 67, 125, 222,
226, 243

observers, 159, 161, 162, *See also*
"eyes."

obstacle, 7, 8, 9, 14, 31, 32, 39,
40, 47, 55, 84, 85, 89, 111,
113, 115, 118, 125, 126, 129,
146, 162, 189, 203, 204, 205,
221, 222, 225, 232, 242

OC (observer-controller), 21, 82,
98, 103, 143, 152, 161, 185,
188, 191, 228

- offensive, 10 12, 14, 35, 54, 176, 199, 200, 204, 210
- OH-58 - 83
- OP (observation post), 187
- OPORDER (operation order), 45, 63, 121, 145, 146
- opportunity, 9, 10, 13, 16, 18, 21, 56, 64, 70, 98, 130, 171, 174, 176, 178, 191, 193, 197, 219
- OPTEMPO (operating tempo), 75, 81
- orchestration, 15, 16
- over-the-shoulder, 91, 166

- PAA (position area for artillery), 66
- Paladin, 92
- passage of lines, 31, 32, 33, 132, 181, 234
- Patton, Gen. George S., Jr., 21, 35, 172, 175
- Peanut, 4, 54, 145, 147, 205
- picture, 26, 31, 32, 33, 60, 64, 78, 84, 85, 86, 95, 118, 165, 166, 171, 173, 174, 181, 189, 209, 236, 245
- PIR (priority intelligence requirements), 53, 79, 195, 197, 244
- planning, 34, 60, 69, 81, 82, 86, 92, 93, 98, 111, 112, 115, 117, 121, 122, 133, 141, 146, 157, 186, 232, 237, 242, 243
- position on the battlefield, 12, 52, 66, 79, 97, 214,
- purpose, 19, 46, 79, 99, 101, 148, 150, 176, 207, 208, 222, 243

- R&S plan (reconnaissance and surveillance plan), 52, 240
- Racetrack, 3, 4, 107, 123, 127, 148, 154, 185
- radar, 26, 52, 55, 136, 161
- radio traffic, 22, 89, 95
- Raptor, 199, 200, *See also* ICO.
- recock, 128, 130, 132, 151, 219
- reconnaissance, 7, 8, 16, 33, 38, 44, 46, 48, 49, 51, 53, 58, 61, 69, 70, 72, 73, 74, 79, 80, 84, 85, 91, 93, 99, 105, 107, 127, 140, 150, 160, 161, 166, 183, 186, 187, 171, 197, 233, 237, 238, 240
- Red Pass, 5, 7, 8, 187
- red zone fight, 199
- rehearsal, 21, 35, 44, 82, 83, 89, 90, 92, 93, 114, 121, 122, 133, 142, 146, 235
- repetitive, 18, 19, 20, 36, 74
- reserve, 12, 51, 52, 53, 57, 61, 73, 90, 91, 92, 97, 99, 102, 105, 125, 140, 150, 204, 225, 227, 228, 239, 240
- retransmission, 77, 87, 88, 156, 210
- reverse slope, 7, 39, 70, 76, 119, 126
- RFI (request for information), 150
- Rhine River, 175
- risk, 25, 26, 30, 50, 51, 52, 64, 65, 66, 67, 73, 76, 90, 161, 165, 168, 169, 184, 195, 198, 200, 231
- rock drill, 35, 92, 93
- Rommel, Field Marshal Erwin, 170
- running estimate, 19, 148, 149, 157

- S2 - 31, 85, 91, 96, 152, 181, 191, 214, 243, 245
- S3 - 31, 52, 64, 81, 84, 87, 92, 97, 112, 113, 130, 137, 142, 143, 146, 152, 156, 191, 192, 193, 199, 230, 231, 238, 241, 242, 243, 244, 245
- sabot, 138
- safety, 66, 67, 88, 89, 90, 190
- Sapper, 111, 124, 125

scatterable mines, 113, 201
 schwerpunkt, 203
 scouts, 22, 55, 74, 83, 156, 176,
 187, 209, 231, 233, 234, 237,
 240, 241, 244
 SEAD (suppression of enemy air
 defense), 66
 sector, 7, 33, 39, 72, 73, 78, 146
 see the enemy, 18, 19, 45, 152,
 160, 161, 168, 169, 233, 243
 see the terrain, 13, 43, 233
 see yourself, 13, 18, 150, 157,
 233
 sequential, 15, 16, 20, 38, 62, 73
 shape, 39, 40, 114, 157, 182, 242
 Siberia, 5, 39, 43, 51, 54, 97, 99,
 100, 102, 125, 130
 Siberian Ridge, 5, 7, 70
 simulation, 11, 19, 20, 72, 75, 93,
 173, 177, 192, 194, 196, 198,
 217
 simultaneous, 15, 16, 19, 20, 21,
 33, 34, 62, 66, 77, 82, 92, 146,
 153, 218, 219
 SITREP (situation report), 154,
 156, 191, 192
 situational awareness, 16, 30, 62,
 72, 75, 77, 89, 123, 132, 135,
 165, 168, 169, 170, 171, 174,
 179, 191
 smoke, 7, 26, 46, 58, 66, 67, 96,
 97, 113, 125, 132, 138, 139,
 154, 220, 222, 223, 224, 226,
 236, 238, 240, 241, 242, 244
 Sokol, 78
 Southern Corridor, 5, 54, 69, 72,
 77, 87, 90, 91, 128, 140, 142
 South Wall, 51, 97, 118, 119,
 124, 148, 151, 152, 153, 184,
 185, 192, 220, 233
 SP (start point), 31, 114
 space, 15, 19, 20, 36, 39, 72, 73,
 77, 78, 124, 195
 specificity, 14, 18, 145, 237
 staff, 11, 12, 15, 17, 18, 22, 43,
 45, 49, 65, 77, 81, 82, 84, 89,
 93, 94, 95, 96, 105, 113, 121,
 122, 139, 145, 155, 179, 183,
 189, 196, 198, 246
 striker platoon, 74
 supervision, 21, 22, 23, 47, 48
 supporting effort, 29, 46, 99, 101,
 102, 104, 113, 131, 245
 survivability position, 116
 synchronization, 15, 16, 21, 36,
 41, 67, 96, 98, 101, 102, 105,
 106, 109, 115, 121, 122, 127,
 142, 152, 204
 synergistic, 20, 21
 TAC (tactical CP), 31, 112, 113,
 123, 130, 131, 142, 179, 189
 TACSAT (tactical satellite), 79
 TAI (target area of interest), 34
 task and purpose, 46, 101
 Task Force Angel, 39, 52, 127,
 225
 task organization, 46, 49, 50, 149,
 150
 technology, 20, 31, 32, 35, 36,
 45, 72, 75, 135, 139, 165, 178,
 200
 tempo, 22, 75, 76, 166
 terrain, 2, 8, 9, 10, 13, 17, 18, 19,
 21, 23, 38, 40, 43, 45, 53, 60,
 61, 70, 74, 99, 101, 104, 105,
 107, 109, 111, 112, 114, 117,
 118, 119, 121, 122, 123, 136,
 137, 138, 140, 141, 147, 150,
 151, 152, 153, 154, 155, 157,
 162, 193, 200, 202, 207, 209,
 210, 211, 213, 214, 216, 224,
 225, 226, 229, 231, 233, 234,
 235, 239, 240, 241, 242, 243
 terrain analysis, 88, 111, 112,
 118, 119, 120, 125
 Tiefort Mountain, 5, 136, 183
 time and space, 12, 15, 63, 157

- TOC (tactical operations center),
22, 53, 62, 65, 77, 80, 83, 85,
86, 87, 92, 95, 104, 111, 112,
113, 117, 118, 123, 128, 143,
146, 148, 150, 156, 165, 166,
170, 171, 173, 179, 186, 189,
191, 192, 195, 198, 231, 240,
244, 245
- TOW (tube-launched, optically-
tracked, wire-guided), 26, 90,
127, 137
- TRP (target reference point), 115,
117, 131, 132
- TTP (tactics, techniques, and
procedures), 64, 72, 130, 182
- UAV (unmanned aerial vehicle),
45, 72, 73, 77, 85, 86, 88, 134,
175, 196, 197, 198, 199
- UH60, 77, 79, 201, *See also*
Blackhawk.
- Valley of Death, 5, 69, 97, 99,
125, 128, 183, 184
- virtual, 20
- vision, 18, 35, 88, 109, 156, 242,
243
- visualization, 11, 19, 63, 64, 96,
106, 109, 133, 149, 157, 160,
195, 243
- Volcano, 53, 111, 113, 126, 127,
200, 204
- Vtel (commercial video-
teleconferencing hardware), 31
- VTR (vehicle, tracked, recovery),
26
- wadi, 8, 10, 45, 118, 126, 151,
225, 231, 236
- Warfighter (Division-level
Advanced Warfighting
Exercise, [DAWE or DIV
AWE] supporting Digital
Advance Warfighting
Experiment [DAWE]), 49, 72,
165, 199, 200, 201, *See also*
Division AWE.
- wargame, 12, 37, 38, 41, 82, 122,
146, 207
- WARNO (warning order), 58, 93,
243
- Washboard, 4, 9, 10, 59, 60, 61,
150, 151, 152, 233, 234
- weather, 16, 17, 58, 60, 61, 159,
160, 161, 188, 226, 229
- Whale, 5, 43, 131
- Whale Gap, 5, 7, 69, 70, 100, 128
- Wurzburg, 165, 166, 167, 170
- XO (executive officer), 7, 8, 77,
84, 112, 113, 153, 156, 213,
215, 244, 245
- zone, 39, 97, 165

