

THE ROLE OF BATTLE CAPTAINS IN BRIGADE
AND BATTALION TACTICAL
OPERATIONS CENTERS

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

CRAIG A. ENGEL, MAJ, USA
B.S., University of Wisconsin, Oshkosh, Wisconsin, 1985

Fort Leavenworth, Kansas

1999

Approved for public release; distribution is unlimited.

DTIC QUALITY INSPECTED 4

19990909 356

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302 and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 4 Jun 1999		3. REPORT TYPE AND DATES COVERED Master's Thesis 7 Aug 98 - 4 Jun 99
4. TITLE AND SUBTITLE The Role of Battle Captains in Brigade and Battalion Tactical Operations Centers			5. FUNDING NUMBERS	
6. AUTHOR(S) Major Craig A. Engel				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-G Fort Leavenworth, Kansas 66027-1352			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution is unlimited.			12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) This study investigates the role of the battle captain in brigade and battalion combat arms tactical operations centers. Current Army command and control doctrine serves as a vehicle for defining the battle captain's usefulness, duties, and responsibilities, both today and forward toward Army After Next. A cause and effect methodology examines the current state of command and control doctrine to determine its effect on the commander, staff, and information management at brigade and battalion level. The brigade and battalion combat arms tactical operations centers are the first echelons to control and employ Army fighting elements for mission achievement. This study emphasizes the commanders use of the command and control process to rapidly make decisions based upon accurate and timely information. This study explains the Army's philosophy of control and reliance on command and control tools instead of staff and soldier development. This study promotes better integration of digitalization while examining its impact upon the battle captain. The battle captain serves to mitigate the command and control problems centralized within the battalion and brigade tactical operations center. In the future, the battle captain can provide the necessary link to integrate digitalization into a doctrinally redeveloped command and control process.				
14 SUBJECT TERMS Command and control, command, control, battle captain, staff operations, tactical operations center, control Control philosophy, brigade staff, battalion staff, leadership, information, information management, control system, command and control sytem, C2, TOC			15. NUMBER OF PAGES 130	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT SAR	

MASTER OF MILITARY ART AND SCIENCE


THESIS APPROVAL PAGE

Name of Candidate: Major Craig A. Engel

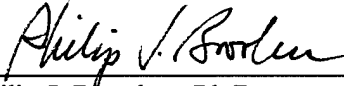
Thesis Title: The Role of Battle Captains in Brigade and Battalion Tactical Operations Centers

Approved by:

_____, Thesis Committee Chairman
Roger J. Spiller, Ph.D.

_____, Member
Major Eduardo Gutierrez, M.S.

Accepted this 4th day of June 1999 by:

_____, Director, Graduate Degree Programs
Philip J. Brookes, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE ROLE OF BATTLE CAPTAINS IN BRIGADE AND BATTALION TACTICAL OPERATIONS CENTERS by MAJ Craig A. Engel, USA, 130 pages.

This study investigates the role of the battle captain in brigade and battalion combat arms tactical operations centers. Current Army command and control doctrine serves as a vehicle for defining the battle captain's usefulness, duties, and responsibilities, both today and forward toward Army After Next. A cause and effect methodology examines the current state of command and control doctrine to determine its effect on the commander, staff, and information management at brigade and battalion level.

The brigade and battalion combat arms tactical operations centers are the first echelons to control and employ Army fighting elements for mission achievement. This study emphasizes the commanders use of the command and control process to rapidly make decisions based upon accurate and timely information.

This study explains the Army's philosophy of control and reliance on command and control tools instead of staff and soldier development. This study promotes better integration of digitalization while examining its impact upon the battle captain. The battle captain serves to mitigate the command and control problems centralized within the battalion and brigade tactical operations center. In the future, the battle captain can provide the necessary link to integrate digitalization into a doctrinally redeveloped command and control process.

TABLE OF CONTENTS

	Page
APPROVAL PAGE.....	ii
ABSTRACT.....	iii
LIST OF ILLUSTRATIONS.....	v
 CHAPTER	
1. INTRODUCTION.....	1
2. COMMAND AND CONTROL.....	17
3. DIRECTED TELESCOPE.....	42
4. BRIGADE AND BATTALION STAFF.....	60
5. CONCLUSIONS AND RECOMMENDATIONS.....	73
APPENDIX. BRIEFING ON THE STATUS OF BATTLE CAPTAINS	91
BIBLIOGRAPHY.....	124
INITIAL DISTRIBUTION LIST.....	129

ILLUSTRATIONS

Figure	Page
1. Command System.....	26
2. Control System.....	30
3. Command and Control.....	39
4. Authority Range of Directed Telescopes.....	56
5. Three Sytems of the Command and Control Process.....	58
6. Comparison of Duties.....	71
7. The Complete Command and Control Process.....	81
8. Combined Arms and Services Staff School Program Of Instruction.....	84
9. Duties And Responsibilities of the Chief Information Management Officer...	88

CHAPTER 1

INTRODUCTION

A review of any brigade or battalion table of organization reveals no unit position for a battle captain. The unit is authorized positions for primary staff officers and assistants within the operations section, but no assistant for other coordinating staff officers or the executive officer. A detailed look into Army field manuals, pertaining to combat arms units and operations, will reveal no doctrinal references or descriptions for a battle captain. Not even the Army capstone manual for staff operations will provide any information on battle captains.¹ The Center for Army Lessons Learned Newsletter No. 95-7, *Tactical Operations Center*, provides one of the few Army references to battle captains. The newsletter devotes one paragraph to the role of the battle captain and provides a short list of the battle captain's duties and responsibilities.²

The lack of doctrine on battle captains would lead any junior officer or noncommissioned officer to conclude that battle captains exist only in certain units and are not common in the Army. The battle captain's duties and responsibilities are so specialized to support these units that they have no generic application to standard Army combat units. A new second lieutenant, even if he hears the term battle captain, could easily decide that he will never be a battle captain. To that second lieutenant's astonishment, upon arrival at his first assignment, not only will he learn quickly what a

¹Department of the Army, U.S. Army Combined Arms Center, FM 101-5, *Staff Organizations and Procedures* (Ft. Leavenworth, KS: USACAC, 31 May 1997), 1-1 to 6-5.

²Department of the Army, Center for Army Lessons Learned, Newsletter No. 95-7, *Tactical Operations Center* (Ft. Leavenworth, KS: CALL, May 1995), III-2.

battle captain is, but will soon learn that one day he will become a battle captain. The battalion and brigade battle captain's situation is best summed up in the title of an article by CPT Marcus F. de Oliveira, "*What now, Battle Captain? The Who, What and How of the Job on Nobody's Books, but Found in Every Unit's TOC.*"³

Indeed, battle captains can be found in every combat arms brigade and battalion tactical operations center throughout the Army. However, the history of battle captain development within the tactical operations center is vague. Unlike other staff positions which can be historically traced, the battle captain appears a more modern role. Army doctrine and history have been consistently silent on the battle captain position. This silence indicates that the battle captain was developed not at an Army doctrinal level, but as a unit level development that has subsequently migrated throughout the Army. The battle captain's role remains unrecognized by doctrine, despite becoming ingrained into unit-level tactical operations. The bottom-up development of battle captains, with their Army-wide acceptance, establishes that tactical commanders recognize the importance of the battle captain.

Anecdotal evidence shows the term battle captain began to appear in brigade and battalion tactical operations centers during the late 1980s. The first indication of a battle captain type of duty position within the tactical operations center is found in Field Circular 71-6, *Battalion and Brigade Command and Control*, published in 1985. Though no

³Marcus F. De Oliveira, "What Now Battle Captain? The Who, What and How of the Job on Nobody's Books, but Found in Every Unit's TOC," *CTC Quarterly Bulletin*, 2d Quarter, FY 95 (Ft. Leavenworth, KS: CALL, May 1995) [bulletin on-line]; available from http://call.army.mil/CALL/CTC_BULL/2QFY95/CTCCHAP1.htm; Internet; accessed 15 August 1998.

longer approved for use, the field circular provides a definition of a tactical operations center officer-in-charge, a definition that may provide the early foundation for the development of battle captains.⁴ The field circular defines an officer-in-charge as any officer whose presence is normally continuous in the tactical operations center and possesses the required seniority. Current Army doctrine opposes this definition and places the executive officer as the tactical operations center officer-in-charge. The current tactical operations center officer-in-charge definition fulfills the field circular seniority requirement, but with the numerous duties for which the executive officer is responsible, the definition lacks the requirement for continuous presence in the tactical operations center. The battle captain's growth may serve to fill the void between the field circular definition and current doctrine.

Several years after Field Circular 71-6, another insight into the development of the battle captain arose and serves to synthesize the current doctrinal definition for a tactical operations center officer-in-charge, with the definition provided in Field Circular 71-6. In a School of Advanced Military Studies monograph, Major Thomas R. Goedkoop portrays a picture of the ideal tactical operations center and its functions in which personnel are divided into two shifts to provide twenty-four-hour operational coverage.⁵ Key personnel are not included in the shifts, but as in the case of the executive officer, would be present in the tactical operations center during operations. In the executive officer's absence was

⁴Department of the Army, U.S. Army Infantry Center and U.S. Army Armor Center, Field Circular 71-6, *Battalion and Brigade Command and Control* (Ft. Benning, GA: USAIC, 1985), B-1.

⁵Major Thomas R. Goedkoop, "The Task Force Tactical Operations Center: An Organization for Success" (Monograph, School of Advanced Military Studies, Ft. Leavenworth, 27 November 1988), 36.

placed a shift leader. The shift leader was either the assistant S3 air or chemical officer. The shift leader's duties and responsibilities were not detailed, but in presenting a model shift organization, it shows that this shift leader would control all the coordinating and special staff within the tactical operations center.

Without a doctrinal basis, institutional training for battle captains does not exist. In 1993, due to an identified lack of battalion and brigade staff training for junior officers, the Army Research Institute, Fort Benning Field Unit, in conjunction with the U.S. Army Research Institute for Behavioral and Social Sciences developed *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers*.⁶ The sponsors of the study were the Commander, U.S. Army Joint Readiness Training Center, and the Deputy Commanding General, U.S. Army Combined Arms Command. Outbriefs for the study were conducted with the Infantry School and Training and Doctrine Command. The study and resulting handbook were intended to provide commanders a tool for teaching new battalion staff officers their tactical duties and responsibilities and garrison roles in the form of detailed checklists. The handbook briefly describes the battle captain's role as in the context of the assistant S3 Air Officer. Specifically, it states that "the S3 Air is located in the main CP [command post] and functions as Battle Captain and XO's [executive officer's] deputy."⁷ The handbook fails to provide a checklist of duties and responsibilities for the S3 air battle

⁶Department of the Army, Office of the Deputy Chief of Staff for Personnel, Research Product 94-02, *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers* (Ft. Benning, GA: Army Research Institute, 1993), V.

⁷Ibid., A-55.

captain as it does for all the other coordinating and special staff--hardly clear guidance for a new staff officer that has received no training. It is also interesting that none of the institutions involved with the study first failed to identify the nondoctrinal position of battle captain, and second failed to provide any significant duties and responsibilities to help define the position.

In the same month as the release of both the Army Research Institute study and of the handbook, Lieutenant John R. Rosenfeld published an article on the S3 Air based upon his own experience. His article not only describes the traditional duties and responsibilities of an S3 air, but he assigns the battle captain as an additional role for the S3 air. What Rosenfeld presents is a limited view of the battle captain in relation to the manner he was employed by his commander. In summary, Rosenfeld presents the battle captain as someone in the tactical operations center that must be prepared to do everything, all the time. As a captain and as the only assistant staff officer, the battle captain leads the second team and assists the S3 in the performance of his tactical duties and responsibilities.⁸ Rosenfeld's article made a significant assumption about the duties and responsibilities of a battle captain because he failed to recognize that the role of the battle captain may be fully dependent on the leadership style of the commander. In other words, if there is no doctrinal standard for a battle captain, then Rosenfeld's model was dependent on the leadership style of a given commander.

⁸Lieutenant John R Rosenfeld, "The S3 Air More Than an Airspace Coordinator," *Infantry* 83, no. 6 (November-December 1993): 13-16.

Three problems can be gleaned from these articles. First, there is no ready reference for a new battle captain to refer to in order to learn his job. Second, the battle captain's role was never doctrinally defined, either purposely or by omission, and remained dependent on the leadership style of the commander, executive officer, and S3 instead of institutional or doctrinal standards. Finally, it is not clear for whom the battle captain works. Little has been done to correct or even address these problems. The Infantry Officer Advance Course only provides captains with a cursory overview of the battle captain and serves to perpetuate the problems. The Infantry school readily admits that there are few references to the battle captain role and only provides captains with copies of two articles on battle captains and the Center for Army Lessons Learned Newsletter on tactical operation centers. The only additional instruction provided is a rather all-encompassing list of a battle captain's duties and responsibilities. The battle captain's purpose is to maintain maps and chart, manage information, manage current and future operations, be a decision maker and planner, and serve as shift officer in charge. The majority of instruction is spent on executing the military decision making process.⁹ Finally, the Infantry School position is that the battle captain works "works closely with CMD [command] group, company commanders, and staff."¹⁰

A battle captain today is traditionally a junior captain, advance course qualified, awaiting a company command within the unit. Prior to the officer's advanced course,

⁹Small group instructor's teaching packet, Infantry Officer Advanced Course, (Ft. Benning, GA, IOAC, 25 June 1997). Obtained by the author from a former advance course instructor, November 1998.

¹⁰Ibid.

most of an officer's experience is at company level. This level offers little insight into battalion, and especially brigade, staff operations. "Since 1974, The officer advance courses do little to train maneuver branch officers in staff preparatory training. This has left staff functional area training [staff preparatory training] limited to on-the-job training and mentoring."¹¹ Additionally, 59 percent of armor and infantry officers are assigned to staff positions before their officer advance course.¹² The lack of training places a battle captain in a difficult position. On-the-job training requires a standard. The battle captain does not have this standard, and unless some guidance is provided in unit standard operating procedures, the battle captain is left in a position to define his own standard. Without a clear doctrinal or institutional background (for a battle captain to base his duties and responsibilities), mentorship becomes the only method for a new battle captain to learn his job. This method creates its own problems. The battle captain serves only when the tactical operations center is established. The senior officers available to mentor the battle captain are often overwhelmed with other responsibilities during tactical operations. Both on-the-job training and mentoring have not proven to be effective solutions to staff training.¹³ The outcome is a set of duties and responsibilities for a battle captain as diverse as the number of battalion and brigade tactical operations centers and junior captains attempting to do the best they can in a job without a duty description.

¹¹Thomas J. Thompson et al., *Research Report 1607: Battle Staff Training and Synchronization in Light Infantry Battalions and Task Forces*, (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, December 1991), viii.

¹²Ibid.

¹³Ibid.

Little change will occur in the doctrine to address the position of battle captain. Current draft doctrinal works from both the U.S. Army Armor School and the Combined Arms Doctrinal Development Office provide only vague definitions and responsibilities for a battle captain. Field Manual 100-34-1 [draft], "Tactics, Techniques and Procedures (TTPs) for Command Post Operations" provides the most detailed definition of a battle captain. It compares the role of the battle captain to the role of the executive officer, but supports this definition with only five battle tasks.¹⁴ Several problems arise with the draft manuals. First, tactics, techniques, and procedures are not doctrine, but in this case are only methods for accomplishing command and control operations. Second, without detailed duties and responsibilities, as laid out for other coordinating and special staff officers within the manual, the role of the battle captain remains subjective to unit leadership.

Currently, the best definition of a battle captain is contained in Field Manual 34-25-3. It is the only doctrinal publication that addresses the battle captain and provides a detailed description of the battle captain. Uniquely, the manual's proponent is the U.S. Army Intelligence Center and not a combat arms center. The manual states:

The battle captain supervises the ACE (Analysis and Control Element) analysis, target nomination, collection management, technical control, and dissemination operations during his shift. As a key leader within the ACE, the battle captain ensures subordinate supervisors and analysts are focused on the commander's PIR (Priority Intelligence Requirements) and synchronized with the command's operations. He accomplishes his duties by retaining personal mobility within the ACE, communicating with ACE personnel and other staff elements, and maintaining situation awareness within the ACE. His ability to move freely within

¹⁴Department of the Army, Combined Arms Doctrinal Development. Field Manual 100-34-1 [draft], "Tactics, Techniques, and Procedures for Command Post Operations" (Ft Leavenworth: CADD, [October 1998]), np.

the ACE helps him to focus the ACE and apply his knowledge and experience where it can be most beneficial.¹⁵

The definition presented for the analysis and control element could easily be modified to apply to a tactical operations center. Has the Intelligence Center discovered the duties and responsibilities for the battle captain?

The term battle captain slipped its way into the Army. Whether for valid purposes or not, commanders began to use captains in the tactical operations center to fill apparent doctrinal voids created during the conceptual development and implementation of battle command and AirLand Battle doctrine. Though battle captains became ingrained into maneuver tactical operations centers, training and formal doctrine did not accept the concept and have failed to address it. However, one may argue that the development of the battle captain, at the unit level, constitutes an informal doctrine. Roger J. Spiller, in an article on doctrine and the US Army after Vietnam describes this as "implied doctrine" based upon "lessons from field operations [that] were passed along, they were conveyed in the most informal and irregular fashion."¹⁶ To understand why this has occurred, the command and control environment of the battle captain must be examined.

The U.S. military's approach to command and control can best be compared to the swing of a pendulum, moving from one extreme to the other along its predetermined arc. The swing began with a focus solely upon command. The commander and his decisions

¹⁵Department of the Army, U.S. Army Intelligence Center and Fort Huachuca, FM 34-25-3, *All Source Analysis System and the Analysis and Control Element* (Ft. Huachuca, AZ: U.S. Army Intelligence Center, 1995), 2-9.

¹⁶Roger J. Spiller, "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam," *The Journal of the Royal United Services Institute for Defence Study* 142, no. 6 (1997): 41.

were the basis of a fighting force and its success. Initially, command encompassed the will of a commander, without the aid of any advanced technology, upon a small group of people. Control was exercised only out to the distance of a commander's voice. This remained relatively unchanged for centuries and the pendulum swung slowly. Armies grew, and some technological development occurred that emphasized more control systems. Messengers and staffs organizationally developed to aid control, but the success of a military force remained centered upon the commander. As late as the writings by Carl von Clausewitz on military genius and those of one of Clausewitz's followers Helmuth Graf von Moltke in 1870, the commander remained the focus of command and control. Control existed solely to serve the commander, or as Moltke wrote:

But the most unfortunate of all supreme commanders is the one who is under close supervision, who has to give an account of his plans and intentions every hour of every day. This supervision may be exercised through a delegate of the highest authority at his headquarters or a telegraph wire attached to his back. In such a case all independence, rapid decision, and audacious risk, without which no war can be conducted, ceases. An audacious decision can be arrived at by *one* man only.¹⁷

Moltke had only one major control system technological advance to deal with, that of the telegraph. World War I saw the introductions of wireless radio and telephone systems. World War II introduced radar, code machines, radios to squad level, and nuclear weapons. By the end of World War II, the pendulum arrived at the bottom of its arc, command and control shared equal importance in the process of achieving military

¹⁷Daniel J. Hughs, ed. *Moltke on the Art of War: Selected Writings* (Novato, CA: Presidio Press, 1995), 77.

success.¹⁸ Following World War II, the advent of the computer, satellites, the arms race, operational research, strategic worldwide deployment, and numerous other technological developments have subordinated command to control. The pendulum began to swing in the other direction.

Initially, the Army turned toward control as a method to deal with technology and the vast amount of information it could provide. "To cope with the flood of information, staff was piled upon staff, procedure upon procedure, machine upon machine."¹⁹ This initial reaction set the course for the military and became a self-fulfilling prophesy resulting in the perpetuation of more control. A noted military historian Martin van Creveld, describes the process and result when he wrote in his reflections on command:

With each stage in the growth of staffs, the problem of coordinating the staff's parts with each other, and the staff as a whole with the forces, was compounded. With each new well-defined procedure or formal language, the gain in reliability and precision was offset by a decline in the informal communications, redundancy, and flexibility that are indispensable for the generation of ideas. With the addition of each machine, procedures had to be more strictly defined in order to make automation possible, while the expense of research, development, operation, and maintenance soared. The process, relatively slow at first, gained momentum after 1870 and especially after 1945. During the four decades that have passed since then, the percentage of "command personnel" within a typical Western army has risen fivefold. The growth in the cost of command systems, relative to that of the forces as a whole, has been greater still, even to the point of raising the question whether, assuming the trend continues for another generation, anything will remain of the latter at all.²⁰

¹⁸A detailed discussion on the impact of technology on both command and control and strategy can be found in Manuel De Landa, *War in the Age of Intelligent Machines*, 3d ed. (New York: Urzone Inc., 1994), 11-179.

¹⁹Martin van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 267.

²⁰*Ibid.*

The road the military chose to deal with technology is further compounded by a dream military commanders have held for centuries. The intent of the dream was to eliminate human decision making from the soldiers' ranks to focus them on the common goals of the commander. Commanders achieved this through drill, fixed formations, and limited maneuver. De Landa classified these as "well-oiled clockwork mechanisms" but these armies failed in the face of weapons technology advancements and the resulting requirement for an individual soldier to fire and maneuver to survive on the battlefield, thus, giving soldiers back their decision-making requirement. The dream of taking the human element out of the decision making process was given new life following World War II, but through a different venue. "After World War II, digital computers began to encourage again the fantasy of battles in which machines totally replaced human beings."²¹ De Landa contributes the computer, development of nuclear weapons, and the Air Force's sponsorship in 1946 of the RAND Corporation, with its reliance on operational research, as the major contributors to the dehumanization of the command and control process.

Since World War II, control continues to usurp command to fulfill the prophesy and the dream. The trend is obvious just through the development of acronyms to accommodate the advance of control. The military began with C² (command and control), proceeded to C³ (command, control, and communications), then C³I (command, control, communications, and intelligence), and currently has arrived at C⁴I (command, control, communications, computers, and intelligence). Doctrine and military writing have

²¹De Landa, 97 and 127.

followed suit in the hunt for control and the dehumanization of command and control. In a series of books on command and control published by the Armed Forces Communications and Electronics Association, it is clear where command rates in respect to control. The stated purpose of the third volume in the series, *Principles of Command and Control*, is the "first attempt to assemble a set of materials that describes, explains, prescribes, and predicts C2 [command and control]."²² All thirty-nine articles within the book contain command and control in their title, but not one article talks about command or leadership. Each article deals solely with control issues, such as technology, procedure, or methodology.

The Army trend toward a single focus on control continues now through its Force XXI emphasis on computers and technology to increase effectiveness on the battlefield. The Maneuver Control System, a computer-based system to provide near real-time information to commanders, allows the quick dissemination not only of information, but of directives and orders from higher commanders. The ease of micromanagement of commanders is increased and continues the Army down the road toward control. In the Army After Next Project, intended to guide Army research and development programs for the Army after 2010, and the current Force XXI concepts states that knowledge and speed will make the Army successful past 2010. The Army After Next Project will complete the swing of the pendulum, and command will be completely subordinate to control.

²²Jon L. Boyes and Stephen J. Androile, eds. *AFCEA/Signal Magazine*, C3I Series, vol 6, *Principles of Command and Control* (Washington, D.C.: AFCEA International Press, 1987).

The Army After Next wargames have concluded that knowledge, or information, will give commanders the ability to move rapidly and mass his force to overwhelm the enemy. The knowledge will come from "a robust, redundant, and flexible network of communications and intelligence systems interwoven into a seamless surface-to-space continuum. It [systems] should serve as a living internet of connectivity immediately responsive to soldiers on the ground."²³ The Army After Next Project signals more the loss of a commander and the institutionalization of a systems manager. The project only briefly addresses the issue by stating "that it [the Army] needs a more mature, better-experienced leader and soldier than is the norm today."²⁴

The result of the Army's quest for knowledge and speed is a dehumanized command and control process that produces excessive planning times, little tolerance for error, less freedom for audacity and flexibility, and increased friction.²⁵ It also explains the lack of training and development of the staff and the failure to thoroughly address the battle captain in doctrine. The change to a single focus of control and dehumanization of the command and control process displaces any emphasis on people. Commanders, staffs, and senior Army leaders no longer understand individual importance, impact, and where people fit into the human side of command and control, so they avoid it. If combat decisions are solely based upon complete and accurate information or knowledge, then the

²³Department of the Army, TRADOC, *Annual Report on the Army After Next Project to the Chief of Staff of the Army* [report on-line], (Ft. Monroe, VA: TRADOC, July 1997, accessed 9 December 1998); available from <http://www.tradoc.army.mil>; internet.

²⁴Ibid.

²⁵van Creveld, 249-275.

Army benefits by developing systems that gather and process information instead of training the individual. The Army development of systems intends to eliminate any friction, the accumulation of chance errors, unexpected difficulties, and confusion on the battlefield. The Army hopes to achieve what military thinkers have been dreaming of since Carl von Clausewitz coined the term "friction" in his nineteenth century theoretical work *On War*. More likely, the result of this concentration on control will be even further destruction of the command and control process. Van Creveld theorizes that "the quest for certainty . . . will logically end only when there is nothing left to be certain about."²⁶ This will occur because "the more the available information . . . the longer the time needed to process it, and the greater the danger in failing to distinguish between the relevant and the irrelevant, the important and the unimportant, the reliable and the unreliable, the true and the false."²⁷

To define the role and usefulness of the battle captain, one must view the command and control system in a humanistic perspective. To break the command and control dilemma started in 1946, the Army must gain "what Napoleon calls 'a superior understanding'--one based, to be sure, on training and practice, but ultimately relying no less on intuitive judgment than on rational calculation."²⁸ Focusing on the human side and balancing between command and control will serve to break the Army's current trend.

²⁶Ibid, 267.

²⁷M. I. Handel, "Intelligence and Deception," *Journal of Strategic Studies* 5 (1982), 164; quoted in Martin van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 267.

²⁸van Creveld, 267.

The control systems within a tactical operations center must support the decision-making of the commander. The battle captain then supports the commander through either monitoring the control systems, or aiding the commander in command or through both to be of value. This thesis will seek to first bring a balance to the command and control process, then define the human elements that operate within it, and finally seek to determine the role of the battle captain, if any, and the duties and responsibilities that accompany the position. The thesis will remain within the tactical operations arena. The examination of the command and control process will focus on the battalion and brigade combat arms tactical operations center.

CHAPTER 2

COMMAND AND CONTROL

Until just after World War II, the term command and control did not exist in the Army lexicon. The term command was simply used. Through World War II, the Army invested command and the associated responsibilities for implementing the commander's decisions, within the commander himself. A staff assisted the commander in carrying out his wishes. Though several theories exist for the evolution of the term command and control, all are speculative.¹ However, since World War II, the linkage of command and control has grown to a point where the separate definitions of each term have become imperceptible. Today, the term command and control is often used, not to describe the function of the commander, but as a description for the tactical operations center. Soldiers, schools, and doctrine use command and control to describe a single function, both terms used interchangeably without regard to the exact meaning of each separate word.

Even the Army and joint publications have difficulty in separating the meanings of command and control. The Army and joint definitions define command as an authority given to a commander, but in turn defines control as "an authority which may be less than full command exercised by a commander over part of the activities of subordinate or other organizations."² For example, a commander only exercises control over a special forces

¹Thomas P. Coakley, *Command and Control for War and Peace* (Washington, DC: National Defense University, 1992), 17.

²Headquarters Department of the Army, FM 101-5-1, *Operational Terms and Graphics* (Washington, DC: HQDA, 1997), 1-33.

team placed under his command as TACON (tactical control). This relationship gives the commander authority over the tactical employment of the element, but not for any administrative purposes. Finally, the combined term of command and control is defined as “the exercise of authority and direction by a properly designated commander.”³ The Army attributes each term and its functions directly to the commander while providing subtle, if any, difference between the definitions of command, control, and command and control.

This doctrinal confusion exists because the Army created a command and control system focused only on control and based it in procedural methods, such as the military decision making process or the targeting process. Current Army doctrine, modern writings on command and control, and articles focus on systems, checklist processes, and equipment to define command and control instead of a process that incorporates the strengths of command and the supporting control. In a checklist environment of command and control, technology and equipment become the focus ignoring the aspects of leadership, friction, and human factors. The shift from command, as vested in an individual, to a procedural method of command and control changed the focus from the commander to the tactical operations center.

Even civilian military observers have fallen into the combined terminology of command and control. Martin van Creveld, a noted military historian, combines the terms command and control to define the nature of command. Van Creveld describes the “command system” as a mechanical function. The command system composes two broad responsibilities. The first responsibility is function related. It is the arrangement and

³Ibid., 1-33, 1-38.

coordination of everything the army needs to exist, such as logistical items or maintenance systems. Function-related responsibilities support the Army infrastructure. The second responsibility is output related. Output-related functions are necessary for any army to carry out its mission and include operations, planning, and intelligence.⁴ Van Creveld's command system perpetuates the procedural methodology of command and control that only focuses on control.

The Army has not only combined the terms command and control and consolidated everything within the auspice of control, but it has dehumanized the process. The result is friction. Numerous observations from the combat training centers show that tactical operations center personnel fail to understand the link between command and control. The staff fails to provide the commander the right information, at the right time, and in an analyzed format. The staff creates friction, the accumulation of chance errors, unexpected difficulties, and confusion because the commander cannot accurately read the battlefield, know when to decide, and act without hesitation.⁵ De Landa refers to this friction as "noisy data."⁶ This is a result of the control system failing the command system due to the Army's pursuance of a path focused on technology and control.

Manuel De Landa examines the impact of technology on the military in his book *War in the Age of Intelligent Machines*. He states that there are two methods for armies

⁴Martin van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 5-9.

⁵Department of the Army, Command and General Staff College. FM 100-5, *Operations* (Fort Leavenworth, KS: USACGSC, 1993), 2-7.

⁶Manuel De Landa, *War in the Age of Intelligent Machines*, 3d ed. (New York: Urzone, Inc., 1994), 60.

to deal with friction. The first is decentralized control which spreads friction throughout all levels of command and does not allow it to consolidate at the top echelons. The second method is the “centralized command systems [which] attempt to deal with this problem [friction] by monopolizing the decision-making process in order to maximize certainty at the top.”⁷ In theory, the fewer people involved with the process will reduce the number of levels attributing friction within the system. De Landa states that the military has chosen the second path “along a line of progressive overcentralization pushing it to its self-destructive limits.”⁸ He contributes the military’s selection of a self-destructive path to the military development of

their own breed of intellectual, a breed of war theoreticians . . . born out of World War II applications of mathematics to tactical, logistic, and strategic problems. The many wartime successes of Operational Research (OR), as this discipline came to be known, directly provoked the emergence of think tanks after the conflict was over. These new institutions, like the RAND Corporation, developed OR into a general approach to the problems of the battlefield, an approach that disregarded the human element of war.⁹

Finally, De Landa also contributes the trend to the development of nuclear weapons with their centralized control and accompanying strategic-level planning.¹⁰

Execution does recognize a difference between command and control that doctrine does not. A visit to a combat arms’ battalion tactical operations center, with an outsider’s objective eye, will also recognize a difference. The tactical operations center’s operations

⁷Ibid., 82.

⁸Ibid.

⁹Ibid.

¹⁰Ibid.

sergeant posting the current maintenance status onto a chart would not be seen as control. The commander yelling into the radio at a company commander falling behind the timeline would clearly constitute command. Though a tactical operations center is tasked with command and control for the unit, this does not imply that each individual or staff group both commands and controls. The executive officer would never admit that he is commanding the unit, but he would readily admit to controlling aspects of it. Subordinates within the tactical operations center recognize the responsibility of the commander as the final decision authority and their staff responsibility to support the commander. These personnel also understand the aspect of directing subordinate units as control. At executor level, the executors realize that humans cannot be eliminated from command and control. The staff's interaction with the control process exists despite the Army's attempt to eliminate it. However, the Army's failure to develop the staff has eliminated one thing from the tactical operations center--training. Officers and noncommissioned officers are not trained to identify and take advantage of the strengths, weaknesses, and linkages between command and control.

The Army's melding of command and control into a single procedural method focused on technology and checklists sought to change command and control from an art to pure science. The Army simply provided the tools to the commander and staffs, but failed to provide the knowledge to integrate command and control at the executor level and to recognize the strengths and weaknesses of each separate element. The disconnect between doctrine and execution creates the friction within the command and control

system noted by the training centers. Instead of dispersing friction, the Army's focus on control has consolidated friction within the tactical operations center.

The term command sufficed in a time when technological development was slow, and time was measured in days or hours. As early as 1981, it was clearly recognized that the pace of technology had driven time into the world of minutes and seconds.¹¹

Technology has decreased the commander's decision time and sped up execution.

Checklists and procedure may have enabled units to keep up with the battlefield pace initially, but today they serve to break the close link between command and control and fail to maximize the strengths of each. Control has usurped the concept of command.

However, command and control are indeed separate elements with unique characteristics that, in combination, provide a synergistic effect that guides a unit toward successful mission accomplishment. An examination of each element of command and control is necessary to define their linkage.

The role of the commander, in accordance with Army doctrine, is to command and control units. The Army definition of command is straightforward. Field Manual 101-5 defines command as "the authority a commander in military service lawfully exercises over subordinates by virtue of rank and assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment

¹¹General Donn A. Starry, "Command and Control: An Overview," *Military Review* 11 (November 1981): 2-3.

of assigned missions.”¹² This definition is a sterile approach that defines command, much like van Creveld, as a purely functional, mechanical system. The Army definition provides the command responsibilities of the commander and the authority of the commander to meet his command responsibilities, but it does not provide the method for achieving the commander’s responsibilities. Each Commander is left to develop his own method to execute his command authority, utilize the control system, and meet his responsibilities based upon his training and experiences. Therefore, command becomes an individual initiative.

General Franks, former Commander of the Training and Doctrine Command, recognized the need for method and coined the term “battle command” to provide a deeper definition of command. Battle command challenges the assertion that command is mechanical and systematic and places command, as an individual action, upon the commander. General Franks defined battle command as “the art of synthesizing information, conceptualizing the future, decision making, communicating, and leading and motivating soldiers and organizations to accomplish the mission while in harms way.”¹³ Command is then not a mechanical system, clearly defined and subject to checklist scrutiny, but a personal ability, reflective of a person and his skills.

¹²Department of the Army, U.S. Army Combined Arms Center, FM 101-5, *Staff Organizations and Procedures* (Ft. Leavenworth, KS: USACAC, 31 May 1997), 1-1.

¹³General Frederick M. Franks Jr., “Battle Command, A Commander's Perspective,” *Military Review* 76, no. 3 (May-June 1996) : 14-21; quoted in “General Franks on Battle Command” Briefing (Ft. Irwin, CA: National Training Center Leadership Training Program Briefing, 1998).

The current Army capstone manual on operations, Field Manual 100-5, *Operations*, incorporates General Franks' battle command concept. Unlike the Army's general definition of command, the operations manual personalizes command by stating that "command occurs from the location of the commander, whether he is at a command post, infiltrating at night with his forward light infantry elements, or in a main battle tank moving with the main effort."¹⁴ Lawful authority may give a soldier the opportunity to command, but the action of commanding generates from within the soldier. The manual also provides two vital components to command. Command composes decision making and leadership. Decision making is deciding when, if, and what to decide, while leadership is the ability to implement these decisions. Command is therefore more an art than a science.¹⁵ Command is not a mechanical checklist, but a commander's exercise of combining information, guidance, and experience to achieve decision and action.

Carl von Clausewitz emphasizes the leadership abilities of the commander in his 1833 theoretical work *On War*. Clausewitz characterizes the importance of leader qualities in his discussion of the military genius. He states that a commander requires the "harmonious association" of mental and physical courage, judgment, intellect, resolution, presence of mind, force of mind, thirst for honor, firmness, staunchness, strength of mind, self-command, strong passion, and sense of locality.¹⁶ These qualities clearly show that

¹⁴FM 100-5, 2-14 to 2-15.

¹⁵Ibid.

¹⁶Carl von Clausewitz, *On War*, trans. Colonel J. J. Graham, vols. 1-3 (London: Kegan Paul, Trench, Trubner & Co., Ltd., 1908), 46-71.

Clausewitz believed that command emanated from the leadership skills within the commander.

Much like the leadership qualities discussed by Clausewitz, the upcoming Army capstone doctrine on operations continues to develop the concept of the art of command by listing characteristics that a commander needs to command. These characteristics are leadership, professional knowledge, vision and intellect, judgment and initiative, courage and resolve, self-confidence, the ability to communicate, and integrity and example.¹⁷ Each characteristic applies directly to the art of decision making and leadership and serves to further expand the Army operations manual's definition of command.

Both the current and upcoming operational manuals address leadership as an important aspect of command. The Army definition of leadership is important to understanding the Army view of command. "Leadership is the process of influencing people by providing purpose, direction, and motivation while operating to accomplish the mission and improving the organization."¹⁸ This definition of leadership is substantially similar to the description of battle command. In fact, the leadership manual goes one step further by subjugating decision making as a leadership action. An effective leader applies the characteristics of leadership: values, skills, attributes, and actions, in order to make decisions and effectively lead.

¹⁷Department of the Army, Command and General Staff College, FM 100-5, "Operations" (Initial Draft) (Ft. Leavenworth, KS: USACGSC, 4 April 1997), III-1-2.

¹⁸Department of the Army, Command and General Staff College, FM 22-100, "Army Leadership" (revised final draft) (Fort Leavenworth, KS: USACGSC, 1998), 1-10.

This review of Army manuals, concepts, and terms presents one basic element of command. Command is the exercise of the professional leadership skills of the commander. Only one small aspect differentiates a leader from a commander. A leader may incorporate all the aspects and responsibilities of command, but without the legal authority to command. In other words, certain legal rights of the commander, such as Uniform Code of Military Justice authority or administrative functions, are withheld from the leader. A demonstrated ability to lead achieves command. A soldier must be able to lead to command. Command is a unique balance of leadership characteristics gained throughout a commander's lifetime vested with legal authority. Figure 1 demonstrates the command system as a factor of the commander's leadership.

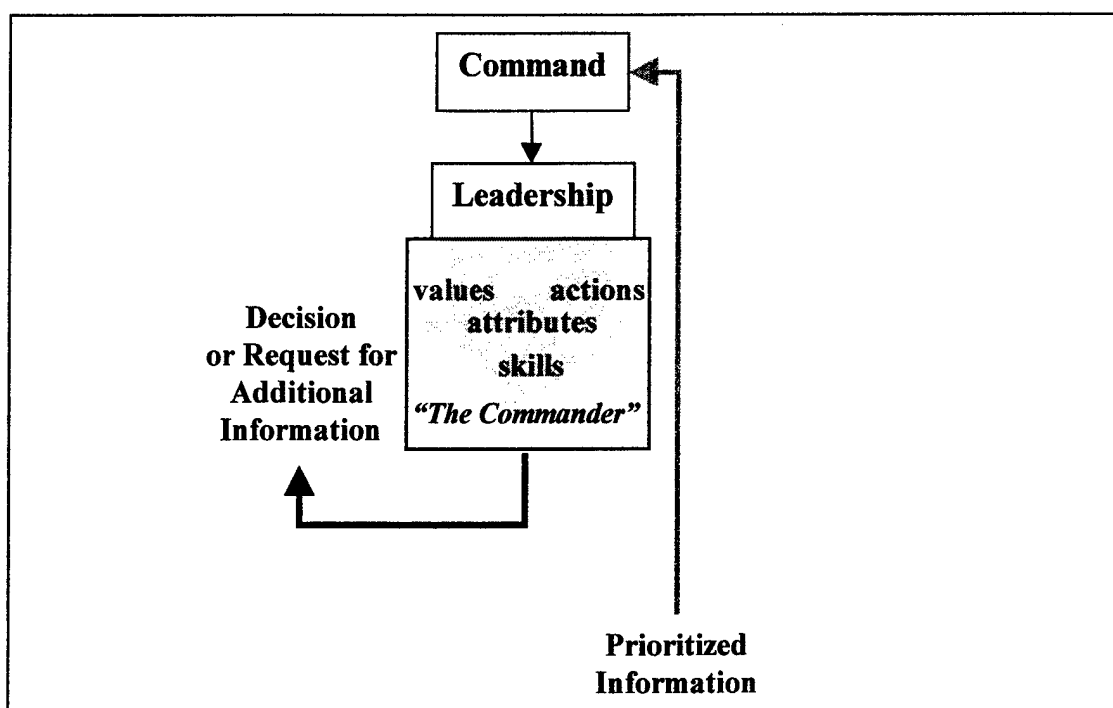


Fig. 1. Command System

A commander applies his leadership style to meet unit requirements while effectively using available resources and planning the employment, organizing, directing, coordinating, and controlling of military forces for the accomplishment of assigned missions; or as General Frank's concept of battle command states, "to synthesize information, conceptualize the future, make decisions, communicate, and lead and motivate soldiers and organizations to accomplish the mission while in harms way."¹⁹ The command system is truly a human element of command and control.

In a 1981 *Military Review* article, Major Dennis Long wrote to refocus the way officers think about command and control and to encourage resolution of command and control problems. In this article, Long makes a simple, but true, observation about the priorities within the command and control process. He states that "everything else in the command and control system is an assist or a tool whose nature is derived from a need of the commander."²⁰ Much as a fire team leader directs, coordinates, and adjusts the actions of his soldiers, a commander must accomplish the same with large groups of soldiers, diverse units, and differing missions. When a command is small, the commander can see, hear, and assess all that is going on quickly and clearly to meet his command responsibilities and control his subordinates. Unit size increases the difficulty in directing, coordinating, and synchronizing the efforts of the unit to accomplish the mission. Control is the instrument that enables a commander to broaden the scope of his command or, more

¹⁹Franks, 14-21.

²⁰Dennis H. Long, "Command and Control: Restoring the Focus," *Military Review* 11 (November 1981): 44.

appropriately, apply the effects of his leadership. The Army's operations manual defines control as "a process by which a commander, assisted by his staff, organizes, directs, and coordinates the activities of the forces allocated to him. To achieve this, the commander and his staff employ common doctrine and use standardized procedures in conjunction with the equipment, communication, and information systems available."²¹ Thus, control is the channel, or system, through which a commander exercises his leadership. It is a two-way channel in which the staff serves as the conduit. The staff provides information and recommendations to the commander based upon information received through the supporting mechanical equipment. In turn, the commander uses his command authority and leadership to decide and to relay decisions through the staff to his subordinates. The use of the control system, within the tactical operations center, enables the commander to expand the scope of his leadership. Control is purely a system that contains the procedures and methods to influence subordinates and coordinate with higher headquarters. To do this, the system requires both input and output. The output is command; the input is information.

Though the control system provides the means to implement command, a system is only an arrangement of like elements to accomplish an output. For control to serve as an implementation of the commander's leadership, a method must be in place to provide the system output. The method to support control is information management. The tactical operations center serves as the hub of control by managing information for the commander. Everything within the tactical operations center serves to support the control

²¹FM 100-5, "Operations" (Initial Draft), III-1-9.

system and ultimately the commander's decision making, through information management.

Since the staff operates the tactical operations center, one can look to the purpose of the staff to verify the reason for the tactical operations center's existence. The Army field manual for staff organization and procedures states that "all staff organizations and procedures exist to make the organization, analysis, and presentation of vast amounts of information manageable for the commander. The commander relies on his staff to get from battlefield 'information' to battlefield 'understanding,' or situational awareness."²² This is one case in which the Army definition outpaces others. Because many military writers address command and control as one element, seldom is there more of a staff definition than to support the commander. In truth, the staff does exist to assist the commander, by acting as the commander's conduit into the control system and as the information manager. Figure 2 portrays the control system. Each element will be described in detail.

One must also keep in mind that command is personality based. Each commander will develop a personalized balance of command characteristics, and this provides an implied task to the staff. First, the staff must operate within the doctrinal duties and responsibilities inherent with their position, but they must also tailor their roles to the personality and leadership style of the commander. Without a clear understanding of the commander's wants and needs, the staff will not provide the information, in the proper

²²FM 101-5, 1-3.

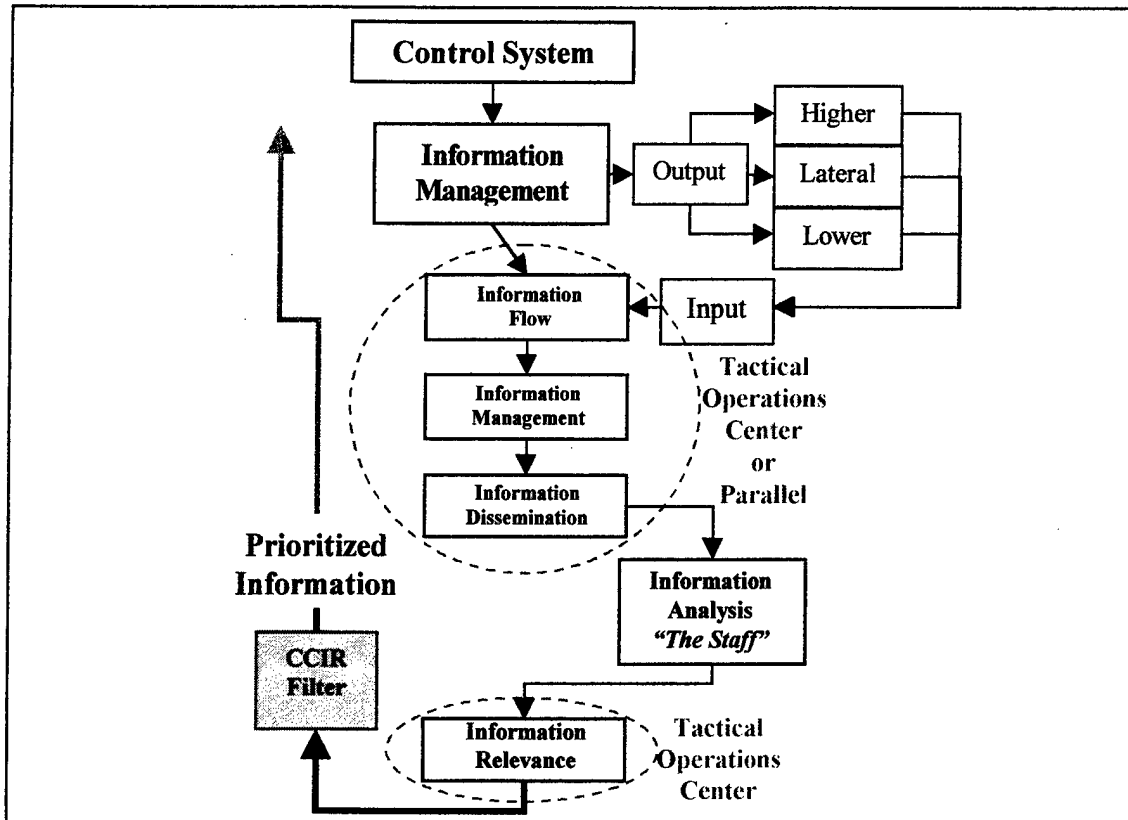


Fig. 2. Control system

format, to the commander so that he may understand it. Doctrine provides the principles to the staff members; the commander provides the specifics. Ultimately the control system and the supporting information management will tailor itself to the command style of the commander.

Information management is composed of several steps. These steps use both mechanical and automated assets to gain and disseminate information through the staff sections. The Army definition of control mentions communications and equipment, but fails to clearly address their relation to information management. Within a tactical operations center, the radios, computers, maps, and charts all exist to assist the staff with

coordinating and managing information. The equipment contributes the mechanical means to support information management. The staff supports information management by focusing information within their specialties.

The staff enables the commander to command or, more specifically, to decide and lead by providing information to the commander. The staff subsequently assists with control by providing information laterally, higher, and lower deriving from the commander's decisions. Within the field of information management, Field Manual 101-5, *Staff Organization and Operations*, defines the staff's specific role in helping the commander exercise control by doing the following: acquiring and applying means to accomplish the commander's intent, defining limits, determining requirements, allocating means, monitoring status and performance and reporting significant changes to the commander, developing specific guidance from general guidance, and forecasting change.²³

The staff fulfills these roles through the staff estimate. The staff estimate supports the commander with information focused on current operations while anticipating future operations. The staff estimate requires the staff to constantly collect, process, and evaluate information while preparation of the estimate requires the staff to understand the commander's intent, the mission, and the status of the unit. Finally, the staff estimate obtains, consolidates, and analyzes information from higher, lower, and lateral sources to

²³Ibid., 1-2.

provide the information necessary to the commander for fulfilling his command responsibility.

The staff focuses on collecting, managing, and analyzing information to develop their estimates and support the control system. Numerous systems, techniques, and methods have developed to deal with information and assist staffs with handling the constant stream of information delivered by advancing technology systems. The Army continues to invest significant manpower and money to answer the information handling question in light of the reduced time available and increased volume.

In 1981, General Donn Starry summarized why information is so important to the commander. "The command and control problem goes something like this: In order to fight the battle successfully, the commander has to find out what is going on, decide what to do about it, tell somebody what to do, then keep track of how the battle is going. He needs to turn that information-decision cycle in time (to get) inside the enemy's information-decision cycle so that, instead of actually reacting to what the enemy does, he can seize the initiative."²⁴ General Starry defines the purpose of information management, the control system, and links it back to command. Field manuals 101-5 and 100-5 also discuss information. However, these manuals, like Starry, do not break information into distinctive subsystems, but treat the whole information-decision cycle as one large system. Thus, perpetuating the idea that command and control are one in the same.

²⁴Starry, 2.

Both General Starry and the Army have treated the information system too simplistically. As the vital system for implementing a commander's leadership through the control system, and coupled with the supporting mechanical and staff elements in the tactical operations center, the flow of information is complicated. Information is inputted into the control system, flows across mechanical and human elements, crosses systems, and provides accurate information to the commander and his subordinates. Information comes from many directions to the tactical operations center. At the tactical operations center, information is centralized only to be spread out again to each staff section for analysis. The digested information is again centralized at the tactical operations center through staff agreement on its meaning and impact. Next, it is presented to the commander for a decision. Finally, subordinates are sent the information as an output. Parallel information systems exist. There are also command, intelligence, and logistics channels for the flow of information. Information management is not, by any means, simple.

Information management truly composes many distinctive steps to produce an output. Army doctrine fails to address the information system in any detail and most writers, like van Creveld, focus only on the homogenized term of command and control. The combat training centers recognize steps within information management because their observer/controllers serve as objective observers within unit tactical operations centers. Through observation, the observer/controllers recognize the steps necessary in information management in order to identify failures within the command and control system. Subordinate steps link information management and serve to control the information

moving into, through, and out of the information system.: A failure to execute one step will lead to failure in effectively managing information. The steps developed to identify critical areas within information management are information flow, information handling, information dissemination, information analysis, and information relevance. As a complete system, these steps enable information management.

The information flow step refers directly to obtaining and disseminating information. Typically, this step comprises the lateral, higher, and lower movement of raw information. It is the input into the control system through information management. Communications equipment, standard operating procedures, reports, and clear guidance directly effect the flow of information and the smooth management of bulk information, coming into and leaving the tactical operations center by limiting and focusing the information. Often, this step is the focus of the clerks and noncommissioned officers working within the tactical operations center.²⁵ The information flow step is the basic building block for information management.

The second step in information management is handling, the process that documents and tracks the information flowing through a tactical operations center. It is sometimes referred to as battletracking. This step is concerned with documenting information in a way that allows quick recovery of the information and movement through the rest of the information management steps. Tools used to handle information include:

²⁵BDM Management Services Company, *JRTC Training Study: Effective Employment of the TOC NCO* (Ft. Polk, LA: JRTC, 1995), B-3.

logs, message forms, significant acts board, maps, and charts. These tools all consolidate and record the raw information flowing into or through the tactical operations center.

The purpose of the first two subsystems is to consolidate the information and record it. The third subsystem of dissemination sends the information in different directions again. Dissemination is the first step that involves the complete staff in information management. Information dissemination begins with the tactical operation center deciding who needs the information to ensure that appropriate coordinating and special staff receive the information that affect their operations. The information is prioritized and moved to the staff sections that require it. Runners, internal communications, and message boards are all tools for moving the information to where it needs to go. Parallel information systems, logistics, intelligence, and fire support, for example, use a duplicate process and require the administrative, logistics center, or intelligence personnel to make the decision and continue the process.

Information analysis, the fourth step, is done by the separate staff elements and may not occur within the tactical operations center. Staffs must determine what the raw information means and determine its effects, if any, on the unit and its mission. Information that is time critical, for example, the sighting of enemy forces, may be analyzed quickly, and units can use the technique of battle drills to accommodate this information. Other information has a long-term impact, such as equipment status reports, and is reviewed for both its short-term and long-term impacts upon the unit. Finally, some information has no impact. The staff sections incorporate the results of their analysis into estimates and returned the estimates to the tactical operations center, through the parallel

systems if applicable, and integrate the analyzed information with other staff section analysis. This produces the big picture of the battlefield environment.

Finally, the tactical operations center must determine the overall relevance of the information to the unit and mission. The commander determines his information requirements and defines what information he requires to gain situational understanding through the use of commander's critical information requirements. The information relevance step utilizes the commander's critical information requirements and other intelligence requirements to complete the process. The priority rating of the information determines the necessity of speed for providing the information to the commander.

The analyzed information is now centralized for use by the commander to provide him with situational understanding and with support for the decision making aspect of leadership. In other words, the information transitions from the control system to command. The successful product of the information system should provide the commander the situational awareness necessary for a decision. The Army does not state the definition of situational awareness clearly and sometimes refers to it as situational understanding.²⁶ The change from awareness to understanding implies that just having the information does not aid the commander, but analyzed information with its relevance to the unit and its mission will enable the commander to make quick and accurate decisions. Situational understanding simply means the commander's ability to understand himself, the enemy, and the terrain or environment and their effect on the unit and mission.

²⁶FM 100-5 (Initial Draft), III-1-9.

The commander now exercises his leadership, makes a decision, and communicates it back into the control system. Though a commander may disseminate his decision personally, normally his decision re-enters the control process through the tactical operations center. Once the tactical operations center communicates the commander's decisions to higher, lateral, and lower units, the tactical operations center has provided the output of the control system.

Finally, information of the future is destined to make the management of information even more complicated and technological to produce larger volumes of information in support of the Army concepts of Force XXI and Army After Next. With digitalization, the Army intends to provide commanders with near real time information and near real time situational understanding, thus speeding up the decision-making process for the commander. A 1997 study by the Army Research Institute for Behavioral Sciences on digitized tactical operations centers identified that information overload and the loss of effective mission critical information is a possible risk of digitalization and a distinct possibility. Commanders voiced the same concern in a recent survey by the institute. To offset this risk, the report concluded that significant training, development of user friendly systems, and changes to supporting subsystems would be required to manage the risk.²⁷ The information system of the future will be more complicated, and the control process will become an even more vital link to command in the future.

²⁷Department of the Army, U.S. Army Research Institute for the Behavioral Sciences, Research Report 1709, *Enhance Performance in Light Infantry Digital Tactical Operations Centers*, (Alexandria, VA: ARI, 1997), 1-25.

Army doctrine defines the command and control system as “the facilities, equipment, communications, procedures, and personnel essential to a commander for planning, directing, and controlling operations of assigned forces pursuant to the missions assigned. The term system is deceptive. It does not solely mean an arrangement of equipment such as a communications system. The C2 [command and control] system is an organization of resources the commander uses to help plan, direct, coordinate, and control military operations to ensure mission accomplishment. The result is combat effectiveness.”²⁸ The definition readily admits that the command and control system is not clear and that the definition is deceiving. The command and control system is confusing because Army doctrine has created systems within systems without clearly establishing their support relationships. However, this may be considered merely an oversight on the Army’s part since its true focus is only on control. The mechanics of the command and control process are actually simple. Command and control stands as a process for the commander to achieve his responsibilities. The separate issues of command, control, staff operations, procedures, information, and personnel are all subordinate to the command and control process. Figure 3 serves to clarify the command and control process.

²⁸FM 101-5, 1-2.

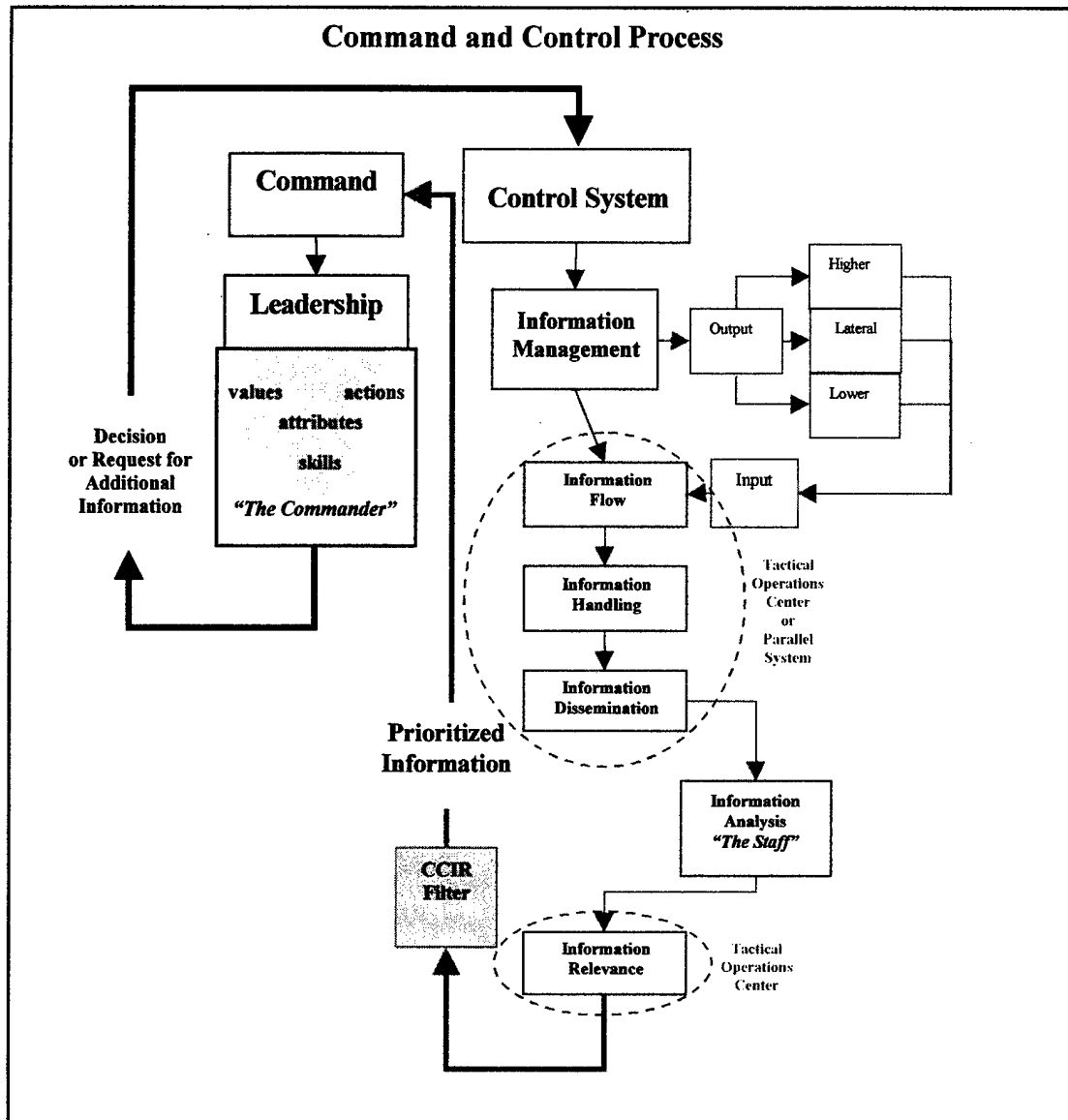


Fig. 3. Command and Control

Command and control is a process that supports human action. The process is dependent on people; people should not be dependent on the process. Human intervention occurs at all levels of information management through the use of noncommissioned officers and officers within the tactical operations center. The process

is driven by the human intervention of the staff, commander, and subordinate commanders. As Manuel De Landa states, the command and control process is based on “humans creatively interfacing with their machines.”²⁹

The command and control process is a synthesis of the separate elements of command and control. However, it goes beyond a simple concept of the sum of each provides a greater effect than separate. With the size, dispersion, and technological impacts on units, command cannot exist without control. In reverse, control would only constitute checklist management without creative human interaction. Command alone could not digest all the battlefield information and decide quickly enough to outpace a moving, responding enemy. While control might result in a quick response, the lack of command leadership would result in an unfocused, uninspired response to the enemy. Until the Army accepts the fact that its chosen path of control technology seeks to create an environment of complete control and the Army finds a way to bring balance between the control processes and human interaction, all the Army’s doctrine on leadership will not eliminate the staff’s inability to understand the relationship between command and control, and the importance of information to regaining the human element. Further, it will continue to lessen the commander’s freedom for audacious, inventive actions and to make unencumbered decisions.

Despite the Army trend toward developing control systems, the two actual key elements of command and control are quality leadership and information in equal portions. Command is centered within the balanced leadership characteristics of the commander. It

²⁹De Landa, 82.

is his vision and judgment that integrates the information provided by the control system and forms a decision. Information management provides the information required by the commander to gain situational understanding. Following the commander's decision, information management provides the method to expand the scope of the commander's leadership. A unit may have a quality leader, but without quality information, the commander is handicapped in decision making. He does not have situational understanding. On the other hand, a unit with good information management may not have quality leadership. The lack of clear leadership will delay any implementation of a decision despite having accurate information.

Now, instead of defining the role of the battle captain, as a component of the tactical operations center under the auspices of command and control, he must be defined within the aspects of leadership or information. If the battle captain exists to serve the commander within the leadership role, the battle captain would be a part of the command system. If the battle captain serves as an element of the information system, he would become a part of control.

CHAPTER 3

DIRECTED TELESCOPE

Field Manual 100-5, *Operations*, states “the characteristics of successful command are leadership, professional knowledge, vision and intellect, judgment and initiative, courage and resolve, self-confidence, the ability to communicate, and integrity and example.”¹ Visualization and intellect includes the commander’s ability to visualize the battlefield and to gain a clear picture. This is the one characteristic in which the commander often depend on others. FM 101-5, *Staff Organizations and Operations*, clearly states that the reason for the existence of a staff and their procedures is to manage information through organization and analysis, and to bring needed information to the commander. “The commander relies on his staff to get from battlefield ‘information’ to battlefield ‘understanding’ or situational awareness, quicker than his adversary.”² The manual never addresses the accuracy of the information provided by the staff. The manual apparently assumes that with increased technology and standardized procedures information will always be accurate, and that the staff or commander are the only methods for gaining information.

The truth is that modern commanders encounter many of the same informational problems that Napoleon met with as the commander of the *Grande Armee*. Much like the command and control process today, the bulk of information that Napoleon had to rely

¹Department of the Army, Command and General Staff College, FM 100-5, “Operations” (Initial Draft) (Ft. Leavenworth, KS: USACGSC, 4 April 1997).

²Department of the Army, U.S. Army Combined Arms Center, FM 101-5, *Staff Organizations and Procedures* (Ft. Leavenworth, KS: USACAC, 31 May 1997), 1-3.

upon in making his decisions was reports gathered and presented by his staff. However, Napoleon found the formal reporting system did not always respond to his needs because "reports tend to become less and less specific; the more numerous the stages through which they pass and the more standardized the form in which they are presented, the greater the danger that they will become so heavily profiled (and possibly sugar-coated or merely distorted by the many summaries) as to become almost meaningless."³ An observation made by Clausewitz during his discussion on quality information and friction states "in a few words, most reports are false, and the timidity of men acts as a multiplier of lies and untruths." serves to further compound the information accuracy problem.⁴ Worse yet, a commander may not have any contact with a subordinate unit. Faced with these potential weaknesses in the control system, a commander must develop a method to verify and fill in gaps in the information he receives from the control system. A complete reliance upon the control system, or upon the staff, for accurate information will likely result in flawed decisions by the commander.

In a pamphlet prepared to support a request from the United States Army Organizational Effectiveness Center, Lieutenant Colonel Gary B. Griffin states, "Throughout military history, regardless of the era or period, changes in force design, advances in technology, new staff configurations, and the several revolutions in the art of war brought on by these changes, the battlefield commanders' driving quest for certainty

³Martin van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 74-75.

⁴Carl von Clausewitz, *On War*, trans. Colonel J.J. Graham, vols. 1-3 (London: Kegan Paul, Trench, Trubner & Co., Ltd., 1908), 76.

concerning battle conditions has remained a historical constant.”⁵ This observation is supported by the Army’s quest for “knowledge and speed” as the keys to success in the twenty-first century Army. In response to the search for accurate information, the control system, supported by staffs, technology, and communications, developed in the Army along with the control system’s inherent weaknesses. However, historically commanders developed another method for gathering information and covering for the weaknesses of the control system--the “directed telescope.” The directed telescope serves as a third system within the command and control process by supporting the commander’s decision making and by providing information through another avenue.

The concept of the “directed telescope” was first introduced by historian Martin Van Creveld and further discussed by Lieutenant Colonel Gary B. Griffin.⁶ The directed telescopes were employed by commanders, throughout history, to bypass friction and provide first-hand information directly to the commander. Though Lieutenant Colonel Griffin refers to them as the “eyes” of the commander, the description goes farther. Van Creveld states that a commander employs a directed telescope

to guard against this danger [weaknesses in the control system] and to keep his subordinates on their toes, a commander needs to have . . . a kind of directed telescope--the metaphor is an apt one--which he can direct, at will, at any part of the enemy’s force, the terrain, or his own army in order to bring in information that is not only less structured than that passed on by normal channels but also tailored to meet his momentary (and specific) needs. Ideally, the regular reporting system

⁵A concise and detailed historical look at directed telescopes can be found in LTC Gary B. Griffin, *The Directed Telescope: A Traditional Element of Effective Command* (Fort Leavenworth, KS: Combat Studies Institute, USACGSC, July 1991), 35.

⁶*Ibid.*, 1.

should tell the commander which questions to ask, and the directed telescope should enable him to answer those questions.⁷

Not only does van Creveld attribute Napoleon's success to his ability to effectively use both the formal control system and the directed telescope, but both van Creveld's and Griffin's historical studies of the directed telescope shows that the best commanders have used directed telescopes to gain information.

By having direct access to the commander, subordinates, soldiers, and other units, the directed telescopes became the eyes, ears, voice, and conscience of the commander. "Routinely, they were charged with seeking out intangible information, such as that pertaining to morale, esprit, and cohesiveness," but their role was almost always more diverse. The directed telescopes pursued the truth, good or bad, for the commander. They verified whether the commander's orders and policies were being followed and more importantly whether the commander's intent was complied with. Directed telescopes also served as a conduit for the commander to directly relay information, orders, and intent to subordinate commanders.⁸

Throughout history, these directed telescopes took many forms and names. Whether called aides, staff officers, or liaison officers, their general role of providing commanders with truthful information and direct lines of communications remained constant. Historical examples date back to Alexander the Great, continued with the Roman Army and into the middle ages, but it was in the eighteenth century that their use

⁷van Creveld, 74-75

⁸Griffin, 36.

became more widespread. Napoleon used two forms of the directed telescope. First was a group of eight to twelve adjutant generals that were selected for their mental and physical powers. This group was prized for their experience and were sent on missions, often far reaching and diplomatic or intelligence oriented, by Napoleon with little guidance. Adjutant generals were given wide latitude to report on anything that might be of interest to Napoleon. Napoleon's second group of directed telescopes was a group of about twelve young officers. These younger officers were given more limited missions to obtain localized information or transmit messages. The *officiers d'ordonance*, as the younger directed telescopes were known, were prized for their courage and determination. For them, no mission was impossible.⁹

Moltke employed officers of the general staff as directed telescopes while serving as the Chief of the General Staff of the Prussian Army. However, his use was different. "With his forces spread over a front two hundred miles long, Moltke was unable to wield a directed telescope in the Napoleonic manner and had to have his 'eyes' stationed permanently on the spot instead."¹⁰ Moltke had the advantage of the telegraph that enabled him to keep his directed telescopes forward. The German Army used directed telescopes at all unit levels during World War I. The directed telescopes were liaison officers tasked to assist with timing movement, synchronizing effects, and exploiting success between the artillery and infantry forces. The directed telescopes maintained a

⁹Creveld, 75.

¹⁰Ibid., 115.

constant communication between artillery units and infantry units, bypassing intermediate chains of command.

The Allied forces used directed telescopes during World War I to compensate for a degenerating command system. As World War I became a stalemate and trench warfare the method of fighting, commanders at all echelons failed to go to the front and gain personal knowledge of what was occurring; they relied more and more on the technology of the telephone, wireless, and telegraph to gain their picture of the war. J. F. C. Fuller wrote that it was "talking, talking, talking in place of leading, leading, leading."¹¹ Allied commanders came more and more to rely on the control system and occasionally directed telescopes to keep in touch with the battle. These allied commanders almost seem to have foretold the current situation the Army finds itself in.

Though Ulysses S. Grant used directed telescopes to provide him critical information from specific areas during a battle, and Robert E. Lee occasionally used directed telescopes, it was specifically between World War I and World War II that the directed telescope gained doctrinal recognition in the U.S. Army. The 1937 Field Manual 101-5, *Staff Officers Field Manual*, used the term liaison officer to provide the Army's definition of the directed telescope prior to World War II. The liaison officer was defined as the commander's principal means of keeping in touch with the tactical situation. The manual provided an excellent list of the traits of a directed telescope: good judgment;

¹¹J. F. C. Fuller, *Generalship: Its Diseases and Their Cure--A Study of the Personal Factor in Command* (Harrisburg, PA: Military Service Publishing Co., 1936), 61; quoted in LTC Gary B. Griffin, *The Directed Telescope: A Traditional Element of Effective Command* (Ft. Leavenworth, KS: Combat Studies Institute, USACGSC, July 1991), 36.

unfailing tact; initiative; sympathy; and acute perception, coupled with exactness and accuracy in determining facts, an ability to express themselves and to deliver impartial reports in the clearest and most concise terms, and good tactical knowledge. The 1937 definition was one of the most detailed doctrinal definitions of the duties and responsibilities of a directed telescope ever published.¹² The duties and responsibilities were first “to keep the commander up to date on the situation within subordinate units by providing information not available in routine reports, information that could ultimately prove critical in the commander’s decision-making process. Second, liaison officers are required to dedicate themselves fully to facilitating communications at all levels in order to achieve a ‘concerted effort.’”¹³

The definition establishes the directed telescope as the third system, though informal, within the command and control process by using it, much like Napoleon, to augment reports and clarify information inaccuracies. The directed telescope supported the commander’s decision-making process and streamlined the flow of intangible information within the command and control process.

The Army choose the traditional role of a directed telescope and put its doctrine to the test during World War II. The formalization of the directed telescope occurred despite, or more appropriately because of technology. Technology made it possible for the German Army to command and control units in highly mobile, decentralized blitzkrieg

¹²United States Army Command and General Staff School, FM 101-5, *Command and Staff Principles* (Tentative) (Ft. Leavenworth, KS: The Command and General Staff School Press, 1937), 157.

¹³Griffin, 36.

warfare. The allied forces were forced to operate in a highly decentralized fashion to counter the German Army. The command and control technology made highly decentralized, deep, and mobile military operations possible, but they also reduced the commander's ability to stay personally in touch with his subordinate units. Better technology did not mean better information for the commander, instead it meant more impersonal and potentially inaccurate reports which required the commander to increase his informal efforts to augment the control system.

During World War II, the United States Seventh Army's solution to the information problem was the creation of the Signal Information and Monitoring units patterned after the British Army Phantom Corps (the British Army identified the same problems with the command and control process during their campaign in North Africa). The Seventh Army deemed this informal control system so important that they developed the units out of their own available assets. In 1943, the Fifth Army was so impressed with the success of these directed telescopes that it created its own. Finally, in 1944 the War Department was convinced of the benefits of the Signal Information and Monitoring units and formally created a company of directed telescopes. The mission of all the Signal Information and Monitoring units was essentially the same. Primarily through signal intercept of friendly units, combined with personal contact with subordinates, the units served as information gatherers providing "field army, corps, and division with timely and

accurate tactical information.”¹⁴ The directed telescopes were outfitted with the best communications equipment available in order to talk directly with the higher headquarters.

General George S. Patton viewed the benefits of the Signal Information and Monitoring units as indispensable, and upon being denied a formal unit by the War Department until after Normandy, he converted a complete cavalry group into directed telescopes for the Third Army. Designated as the Army Information Service by Patton, their mission differed slightly from that of the Signal Information and Monitoring units. The Army Information Service established communications from the forward elements, down to regimental level, directly to the Army headquarters. The information they reported bypassed all intermediate chains of command and went directly to Patton.¹⁵ The Army Information Service was so successful that they were given credit for being “behind Patton’s uncanny knowledge of the situation.”¹⁶ Finally, during the European campaign the three army level information services formally combined and became the Army Tactical Information Service.

Following World War II, General Patton chaired a board, convened by the Army, to look at operations during the war. The board determined that the Army Tactical Information Service’s liaison system was invaluable and recommended that it become a regular part of the peacetime Army. General Eisenhower agreed with the board findings

¹⁴Ibid., 21-26.

¹⁵Ibid., 26-27.

¹⁶Ladislav Farago, *Patton: Ordeal and Triumph* (New York: Obolensky, 1964), 493, quoted in LTC Gary B. Griffin, *The Directed Telescope: A Traditional Element of Effective Command* (Ft. Leavenworth: KS, Combat Studies Institute, USACGSC, July 1991), 36.

and stated that the Army Tactical Information Service was “a highly valuable instrument and one which commanders at all levels will soon learn to appreciate.”¹⁷ However, General Eisenhower predicted what would become the potential downfall of the directed telescope system when he said “unless it is carefully handled it can become an objectionable thing, utilizing men and equipment to the detriment of personal relationships between commanders of the several echelons.”¹⁸

Despite all the praises and recommendations for maintaining the Army Tactical Information Service, due to cost and downsizing the units all disappeared after World War II. As late as 1958, several serious proposals were made to reinvent the units within the reserves, but they were dismissed as “no longer being needed on the modern battlefield.”¹⁹ How quickly the Army forgot the reason the formalized system of directed telescopes was created. The lesson learned in World War II was not that directed telescopes were needed because of a lack of proper technology to command and control, but they were needed because of it.

The directed telescope, which proved vital in response to the technological capabilities given maneuver in World War II, was perverted in the Vietnam War. Martin van Creveld refers to the inappropriate use of directed telescopes in Vietnam as the

¹⁷United States Forces, European Theater, General Board, “Army Tactical Information Service,” Study no. 18 (20 November 1945), app. 2, 2, quoted in LTC Gary B. Griffin, *The Directed Telescope: A Traditional Element of Effective Command* (Fort Leavenworth: Combat Studies Institute, USACGSC, July 1991), 28.

¹⁸Ibid.

¹⁹Griffin, 32.

“misdirected telescope.” The reason for the excessive use of the directed telescope was the entrenchment of operational research and its focus on statistics, combined with a substantial increase in technology. Analysis became the watchword for information, and technology enabled transmission of information quickly to Washington for analysis instead of conducting it in the field. Analysis led to all kinds of tables of information. Kill ratios, body counts, number of villages pacified all became numbers and served to guide, or direct, the conduct of the war. So much information was required to form the statistical analysis, and the technological systems existed for sending it, that the complete control system became inundated with numerically based information that in retrospect told little of the actual conduct of the war. Vietnam command and control was clearly approaching the maxim presented by Van Creveld that “the quest for certainty, in other words, will logically end only when there is nothing left to be certain about.”²⁰ The quest for more information quickly lead to a loss of value in the military reporting system. The control system had “to be supplemented, and in part replaced, by other forms of information gathering.”²¹ Here enters the misdirected telescope.

The misdirected telescope fulfilled the prediction made by General Eisenhower a quarter of a century earlier. With the formal control system completely clogged with statistical information, commanders came to rely relentlessly on the directed telescope to get an appreciation of the battle. The asymmetrical, guerrilla-warfare environment of Vietnam helped ensure that units seldom had more than one of its subordinate elements in

²⁰van Creveld, 267.

²¹Ibid., 255.

contact with the enemy at any particular time. This enabled directed telescopes, from all levels, to focus like wolves upon the company commander on the ground. The introduction of the helicopter as a command and control platform ensured that the misdirected telescopes moved quickly to the battle area. Helicopters would stack up in the sky over the battle: the first level the battalion commander, the second the brigade commander, the third a division commander, and ultimately the field force commander above them all. If the commanders were not aboard the helicopter then representatives ensured reports were sent directly to the higher headquarters. The directed telescope in Vietnam was not a young, capable officer, but it became technology itself, the helicopter. The helicopter became such a powerful telescope that they frequently "almost paralyzed the action they were suppose to monitor."²² Vietnam marked the downfall of the directed telescope in the Army because it had "become an objectionable thing, utilizing men and equipment to the detriment of personal relationships between commanders of the several echelons."²³

The institutional importance of the directed telescope began its downfall after World War II and Vietnam solidified its position as an unnecessary means of gathering information. Since, little has been done to resurrect the directed telescope as a means to augment the formal command system. Directed telescopes were employed by both Central Command and the 3d Army during Desert Shield and Storm. Central Command

²²Ibid., 267.

²³Ladislav Farago, *Patton: Ordeal and Triumph* (New York: Obolensky, 1964), 493, quoted in LTC Gary B. Griffin, *The Directed Telescope: A Traditional Element of Effective Command* (Ft. Leavenworth: KS, Combat Studies Institute, USACGSC, July 1991), 36.

used limited directed telescopes, in the form of special operational forces, to monitor the multinational forces within the coalition. These directed telescopes reported directly to the Central Command commander on the mission capability of the force and the multinational forces commitment to the coalition.²⁴ This traditional relationship worked well because it overcame both technological problems. United States technology was not compatible with multinational technology, and it bonded the relationship between the diverse forces.

In his short study on the directed telescope, LTC Griffin finishes with the question, “if we accept the overall worth of the directed telescope system as it has been successfully applied in the past by many great military leaders, what implications exist for its consideration in the development of modern command and control doctrine, or has technology finally made the directed telescope obsolete?”²⁵ Much like World War II, technology has not made the directed telescope obsolete, but more important. The history of the directed telescope provides three reasons for using a directed telescope today. First, commanders need an informal, personal method to seek or clarify information and aid in their decision making process. The directed telescope has traditionally served this role. Second, both World War II, as a positive example, and Vietnam, as a negative example, portray the relevance of the directed telescope even as command and control technology increases. Better communications and computers do not drive better

²⁴Brigadier General Robert H. Scales, Jr., dir., *Certain Victory: The US Army in the Gulf War* (Ft. Leavenworth, KS: U.S. Army Command and General Staff College Press, 1993), 123.

²⁵Griffin, 37.

information, just more of it. People inputting the information determine its quality. The directed telescope serves to provide a method for a commander to get to the heart of the intangible information he is seeking. Finally, as the Army transitions from a Cold War focus toward the Army After Next, it is apparent that it will work in more coalition-type operations with other multinational forces. Bosnia, Somalia, and Haiti are all indicative of this trend. Technology between multinational forces will not integrate, if for no other reason than most countries do not have the capability and money the United States possesses for developing technology. Directed telescopes can serve to cut through the technology difference. Lieutenant Colonel Griffin succinctly answers his own question too by stating "modern commanders and military theorists can ill afford to ignore the time-honored directed telescope concept in developing command systems capable of meeting the Army's AirLand Battle--Future command and control responsibilities."²⁶

Though most historical reviews on the directed telescope focus on very high echelons of command, the directed telescope is as appropriate at battalion level as at field army level though in a much less formal setting and probably not as a full-time job. When a commander walks into the tactical operations center and states, "Someone go up to B Company and find out what is going on with their maintenance," is he not employing a directed telescope? Though the commander can look at the maintenance board in the tactical operations center and ascertain that B Company's maintenance status on M1A1 tanks is 50 percent fully mission capable, the board does not provide him the details why.

²⁶Griffin, 2.

This is especially true if the other companies are all at 85 percent, herein lies the usefulness of the directed telescope. The commander points the directed telescope to go gather facts and return with both information and observation of tangible and intangible factors to provide a picture of what is going on in B Company. The question is, Whom on the staff serves the role of the directed telescope?

Finally, the Army must consider the authority of the directed telescope.

Historically, the authority of the directed telescope is reflected in the following continuum of command and control functions (fig. 4).²⁷

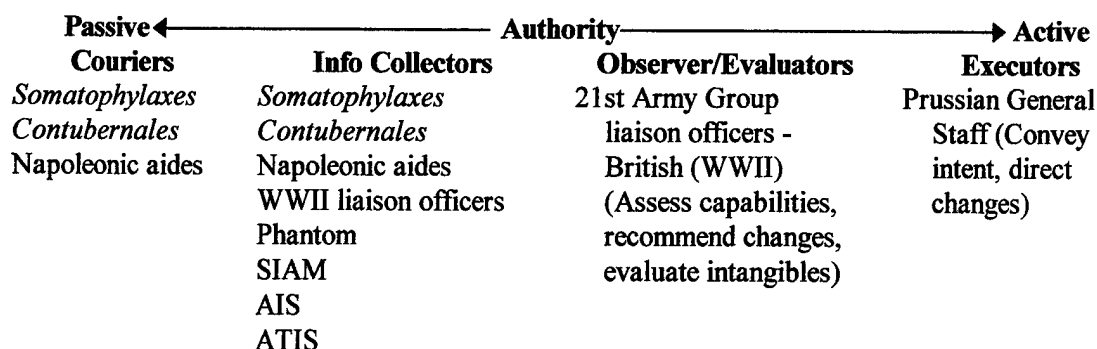


Fig. 4. Authority range of directed telescopes

There is no set rule for the authority given to a directed telescope, but is based upon two factors. First, the experience, training, and personality of the directed telescope which are usually “specially selected, highly qualified, and trusted young officers” must be considered.²⁸ The second factor is the leadership style of the commander. The key is that

²⁷Ibid., 35.

²⁸Ibid., 1.

in any combination of these two factors, each commander must heed General Eisenhower's warning. Van Creveld balances the authority given a directed telescope with his purpose as "to enable a directed telescope to carry out its proper function, care must be taken to design it in such a way as neither to intimidate subordinate commanders nor to become an object of their contempt."²⁹

The danger of increased technology within the command and control system and of a singular focus on control is that the personal interaction among commanders at all levels is lost. Without this personal interaction, commanders lose all means of assessing the intangible elements of a unit's character. The commander's subordinates are reduced to machines, whose operations and functions can be reported objectively and numerically. The increase in technology within a tactical operations center makes the impersonal threat realistic. "The virtues of formal communication systems--standardization, brevity, and precision--cannot be denied; those very virtues, however, also make such systems more subject to interruption and less flexible as a vehicle for original ideas than their unchanneled, redundant, and imprecise informal counterparts."³⁰ The directed telescope enables commanders, at all levels, to maintain personal contact with units, understand the intangible information in those units, add detail to their reports, and develop relationships. A complete picture of the command and control process must include both the formal control system and the informal directed telescope system to support the command system and the overall command and control process (fig. 5).

²⁹van Creveld, 272.

³⁰Ibid., 273.

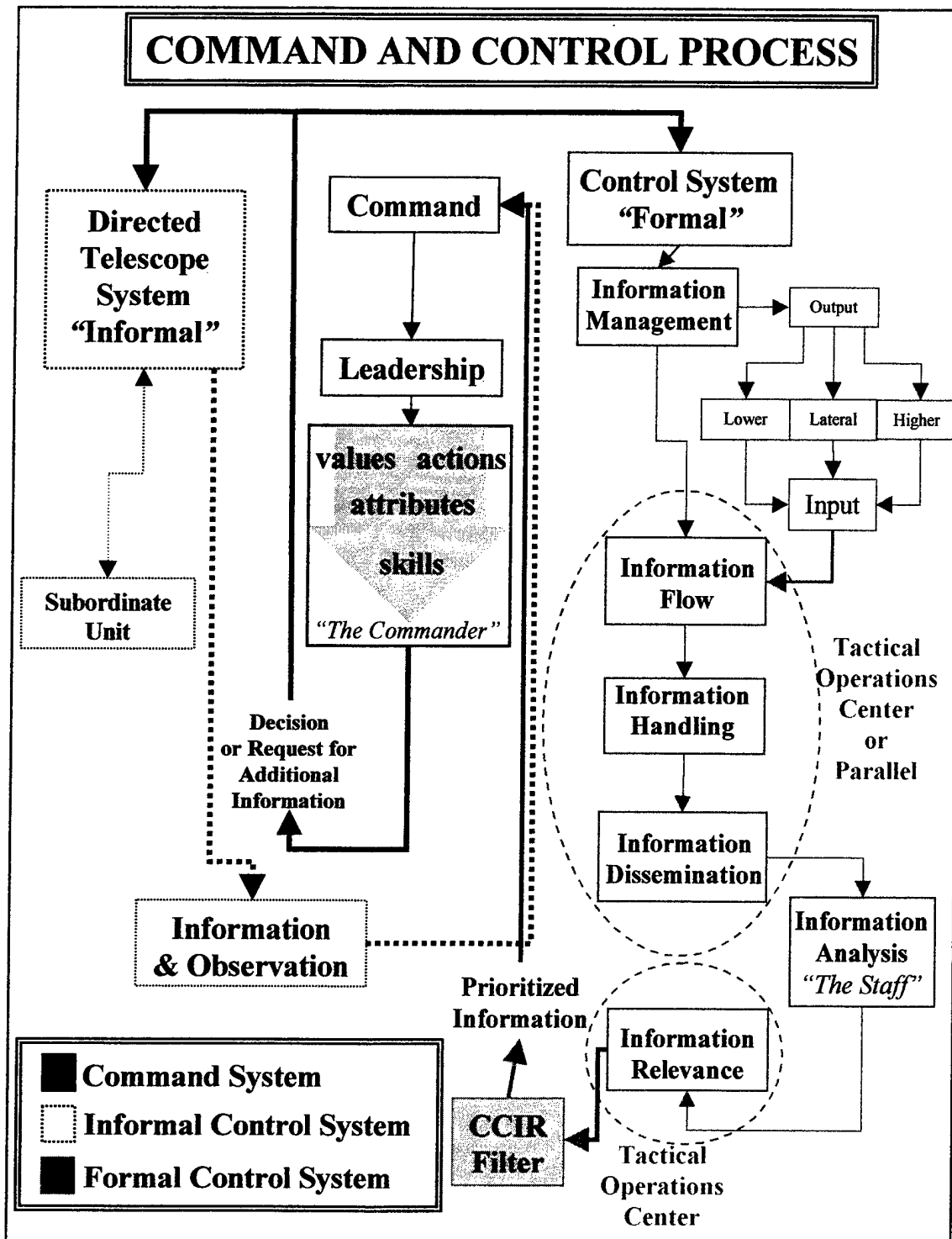


Fig. 5. Three systems of the command and control process

If the battle captain is looked at in the light of the command and control process, specifically within the areas of leadership and information, several options arise from the complete picture of the command and control process. First, the battle captain may serve in a role described as an internally directed telescope by Colonel Gregory Fontenot, a former battalion commander during the Persian Gulf War.³¹ The internally directed telescope kept the staff coordinated and functioning, while maintaining open lines of communication between higher, lower, and lateral units. In this role, the battle captain is simply functioning as a system manager focused on the formal control system. Second, the battle captain may serve purely as a directed telescope seeking information directly for the commander. Lastly, The battle captain may serve as both the traditionally directed telescope and an internally directed telescope based upon the commander's needs. To narrow the options, the makeup of a battalion and brigade staff needs examination and the staff roles considered.

³¹Gregory Fontenot, Commander, Battle Command Training Program, interview by author, 18 September 1998, Fort Leavenworth, KS.

CHAPTER 4

BRIGADE AND BATTALION STAFF

Within the brigade and battalion staffs, all the Army's doctrinal problems with command and control and with its control philosophy accumulate. The brigade and battalion staffs recognize the difference between command and control, and even some of the problems, but fail to understand the uniqueness of each system. The staff exists in a contradictory and confusing doctrinal atmosphere, with little or no training to take advantage of the strengths and weaknesses inherent in the three specific systems outlined in the previous chapters. Whether intended or not, it is the brigade and battalion staff level in which the Army has centralized friction, and it is characterized by staff officers with little sleep, a high level of frustration, and a tactical operations center filled with the air of confusion.

The primary purpose of the staff is to assist the commander. Through the previous development of the command and control process, with its three supporting systems--command, control, and the directed telescope, the staff's primary role supports the commander through the analysis of raw information. Whether one calls this activity the military decision making process, the targeting process, or the development of staff estimates the results are the same: the staff deals with incoming information, determines its effects, and provides it to the commander. A relatively simple example of this activity is the military decision making process. The staff, in a consolidated effort, analyzes raw information (higher headquarters operations order) and develops a group recommendation to the commander. In the end, the tactical operations center simply supports the staff with

raw information through flowing, managing, and disseminating the information in order for the staff to do its job.

None of this constitutes any great revision of Army doctrine's prescriptions on the role of a staff. Field Manual 101-5, *Staff Organization and Operations*, states that "staff officers cannot be just data collectors and transmitters. They must have the ability to analyze and clearly articulate information."¹ Unlike this thesis' control system model, where the tactical operations center and noncommissioned officers have the responsibility to conduct information management in support of the control system and the staff role is limited to analysis, Army staff doctrine contradicts itself. Army staff doctrine does seek to make staff officers purely collectors and transmitters by making the staff responsible for collecting, analyzing, processing, and disseminating all the information that comes into the headquarters.² Army staff doctrine also tends to eliminate the noncommissioned officers from information management. In other words, the staff is responsible for the whole of information management. This doctrinal responsibility is not light. By making the staff responsible for reports at all levels, overlays, maps, and charts, the Army has severely stressed the time available to the staff for conducting analysis. Though there may be limited time available to the staff for analysis, during the conduct of operations the flow of information into a tactical operations center can be burdensome. At a time when analysis and recommendations are most critical, the staff is relegated to becoming

¹Department of the Army, U.S. Army Combined Arms Center, Field Manual 101-5, *Staff Organizations and Procedures* (Ft. Leavenworth, KS: USACAC, 31 May 1997), 4-5.

²Ibid.

noncommissioned officers and managing the whole control system. Any analysis the staff may find time to do is a solo effort, not integrated with any other staff officer. Since their inception the Army's training centers have noticed this problem. A National Training Center long-term observation states that "brigade staffs have difficulty concurrently planning and executing missions. Key staff members are routinely pulled out of the planning process to resolve issues relating to the current fight. This results in plans for subsequent missions that lack sufficient detail."³

The Joint Readiness Training Center found the lack of noncommissioned officer usage in the tactical operations center so severe that they initiated a training study.⁴ However, the study's recommendations missed the mark. The study, *Effective Employment of the TOC NCO* found that noncommissioned officers were underutilized in the tactical operations center, and that both the noncommissioned officers and commissioned officers were well aware of the problem. The study's recommendations fixed blame for the problem on the noncommissioned officers themselves by recommending more training, an increase in Army schooling on staff operations for noncommissioned officers, and better integration into the command and control processes. The study failed to identify the two main problems: first, that the staff did not understand the nature of the command and control process, and second, the staff's doctrinal common

³Department of the Army, Center for Army Lessons Learned, "Trends Analysis.4 Command and Control BOS," *CTC Bulletin National Training Center Trends*, 2nd Quarter FY95 [bulletin on-line]; available from http://call.army.mil/CALL/CTC_BULL/2NTC95/SEC2TA4B.HTM; Internet; accessed 15 August 1998.

⁴BDM Management Services Company, *JRTC Training Study: Effective Employment of the TOC NCO* (Ft. Polk, LA: JRTC, 1995).

responsibilities and duties inevitably forced the staff to displace the noncommissioned officers.

The Center for Army Lessons Learned also noticed Combat Training Center trends and published two newsletters in an attempt to correct the problem. Both missed the mark because they too failed to identify the doctrinal environment causing the problem.

Newsletter No. 95-7, *Tactical Operations Center (TOC)*, identified the problem as a failure of tactical operations center personnel to properly perform their information management duties. The Center's techniques focused on tactics, techniques, and procedures for managing information within the tactical operations center through the use of noncommissioned officers.⁵ Newsletter No. 95-12, *Tactical Decision Making 'Abbreviated Planning'* sought only to cover up the symptoms of the true problem by teaching staffs methods to perform the decision-making process (information analysis) more quickly instead of changing the staff's common duties and responsibilities.⁶ The Army has made several attempts to correct the long-term problems associated with information management, but in the end each failed to identify the root cause as the staff's lack of understanding the command and control process, combined with a doctrinal reinforcement of the staff's confusion.

These root causes contribute to an even worse command and control failure, that of stovepiping, or a failure to integrate the analytical work of each staff section. The

⁵Department of the Army, Center for Army Lessons Learned, Newsletter 95-7, *Tactical Operations Center (TOC)* (Ft. Leavenworth, KS: CALL, 1995), III-1 to IV-4.

⁶Department of the Army, Center for Army Lessons Learned, Newsletter 95-12, *Tactical Decision Making 'Abbreviated Planning'* (Ft. Leavenworth, KS: CALL, 1995), I-1 to VI-1.

sharing of information and determination of its relevance to the unit's mission is the last step of information management, but it is one that is seldom conducted. Again, the failure of the staff to integrate their effort is a constant command and control weakness observed by the Combat Training Centers. The staff, already overwhelmed with the task of collecting and handling information, does not have the time to coordinate their efforts. Major Gary G. Sauer identified this problem in a monograph on battle staff integration by stating "as a result information becomes stove piped [sic] in battlefield operating functions. There is no interactive flow of information, necessary for the staff to function as 'a single, cohesive unit.'"⁷ FM 101-5, *Staff Organization and Operations*, supports the battlefield operating system parochialism of the staff. Each staff member is treated as an individual element, with separate and distinct responsibilities to the commander. Each staff member is tasked with "advising the commander and staff on capabilities, limitations, requirements, resource availability and employment, and all matters that deal with their area of interest."⁸ The manual does discuss the need for staff members to coordinate, but only as a "personal initiative, a spirit of cooperation, and the general interest of each staff member in achieving a unified effort."⁹ Though the statement is almost spiritual in nature, little does it address the importance of integration, the requirement to integrate, or techniques for doing so. Overtasked staff, doctrine, and stovepiping combine at the

⁷Gary G. Sauer, "Battle Staff Integration: The Key to Battle-Tracking in Battalion Command Posts" (Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS, 1996), 17.

⁸Department of the Army, U.S. Army Combined Arms Center, Field Manual 101-5, *Staff Organizations and Procedures* (Ft. Leavenworth, KS: USACAC, 31 May 1997), 4-4.

⁹Ibid.

output of information management as multiple, disorganized voices making separate and sometimes conflicting recommendations to the commander.

Field Marshall Helmuth von Moltke, attributed with the development of the Prussian general staff in the nineteenth century, noted that commanders needed advice to make their decisions and often the advice would come from the collective deliberation of a group. This group would comprise both the staff as part of the formal control system and members of the informal control system. Moltke's view was that the formal command system (the staff) should respond to the commander with a single voice. "Only one authorized person may submit to the commanding general this one opinion" or run this risk:

If one surrounds the supreme commander with a number of independent men, the situation will worsen both as their numbers increase and the more distinguished and intelligent they are. The commander will hear the counsel of the one, then of the other. He will carry out one proper measure up to a certain point, then a better one in another direction. Then he will recognize the entirely justified objections of a third and the proposals of a fourth advisor. We will wager a hundred to one that with the very best-intentioned measures he will probably lose his campaign.¹⁰

With multiple advisors, the commander is forced not only to make a decision based upon information that is not synthesized, but to also decide which information to believe and when. Moltke's recommendation for the advisor was not based upon rank, but according to the commander's confidence in the individual. However, the Army's choice to do this appears to be the executive officer, despite Army doctrine to the contrary, which tasks each staff officer to provide advice to the commander on their own. Staff

¹⁰Daniel J. Hughes, ed. *Moltke on the Art of War: Selected Writings* (Novato, CA: Presidio Press, 1995), 76.

operations doctrine is not very specific, but it tasks the executive officer with passing “pertinent data, information, and insight from the staff to the commander and from the commander to the staff.”¹¹ The executive officer is charged with the “role as supervisor of the staff.”¹² The staff flounder to define their roles and often do their jobs and the jobs of the noncommissioned officers, in light of conflicting and poor doctrine and the lack of training. However, it is the executive officer, in his role as staff supervisor, which sets the tone for the staff support to the command and control process.

Much like the staff, the executive officer’s duties and responsibilities are often contradictory and overwhelming. The list of duties and responsibilities within the staff organization and operations manual is daunting. A cursory look at the executive officer’s duties include: managing the military decision making process and ensuring its coordination and synchronization; serving as the tactical operations center officer-in-charge; supervising the staff’s effort; making sure that staff work is in keeping with the commander’s guidance and intent; serving as the conduit between the staff and commander; maintaining knowledge of all directives, orders and instructions; rendering assistance to subordinate commanders and staffs; and coordinating with special staff. Many of these tasks are constantly occurring, each one seeking the executive officer’s attention and time simultaneously. The executive officer must prioritize his responsibilities, but instead he normally delegates some of his responsibilities to other staff officers. In practice the military decision making process is turned over to the S3, thus

¹¹FM 101-5, 4-2.

¹²Ibid.

sacrificing the executive officer's responsibility for supervising both the staff and the planning process. The results as compiled by the Combat Training Centers are plans that focus on operations, but are not supportable by the other staff elements. Additionally, the executive officer's tactical operations center duties are often turned over to either the S3 or the battle captain. This too sacrifices staff supervision responsibilities because many coordinating and special staff officers work within the tactical operations center. In the end, the executive officer culls down his responsibilities to a reasonable amount, and they are normally focused on the commander's wishes. *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers* clearly states that an executive officer needs to know how a commander intends to use him.¹³

Often, the executive officer's two primary duties designated or implied by the commander are as second in command and as a directed telescope. Both the Army and commanders view the second in command responsibilities as relatively simple. *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers* only provides passing mention of the duty, stating that "as the battalion's 'chief of staff', and 2IC [second in command], he [executive officer] must be prepared to assume the duties of the commander at any time."¹⁴ The handbook assumes that as the executive officer fulfills his supervisory responsibilities for the staff

¹³Department of the Army, Office of the Deputy Chief of Staff for Personnel, Research Product 94-02, *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers* (Alexandria, VA: ARI, 1993), v.

¹⁴*Ibid.*, A-10.

and the formal control system, he will gain a clear understanding of the complete command, the intangible aspects of the unit and its subordinates, and bypass the friction induced when staff officers are presenting information directly to the commander. To meet the second in command responsibility requires personal initiative on the part of the executive officer and becomes a significant additional duty demanding the executive officer's time. The executive officer is once again pulled in another direction.

Responsibility as second in command, combined with the lack of a dedicated directed telescope within doctrine and organization, places a second traditional, and unwritten responsibility upon the executive officer. The executive officer becomes the part-time directed telescope for the commander. Executive officers become the troubleshooters in the unit. The commander sends the executive officer to subordinate units to ascertain the intangible information the commander needs to assess the sterile and direct information from the formal system. The staff operations manual charges the executive officer with the directed telescope role by stating that the executive officer "helps the commander control subordinate units in their preparing for future employment. He [executive officer] monitors their combat readiness status and directs actions which posture subordinate units for use by the commander."¹⁵ Though the Army, after Vietnam, may have eliminated the directed telescope, the directed telescope still lives because commanders will always require intangible information. It is the executive officer who pays the price in loss of time and deviation from his staff supervisory responsibilities.

¹⁵FM 101-5, 4-2.

Finally, to add to the burden upon the executive officer, the Army has streamlined organizations and reduced the size of units in response to dwindling resources and the shift from Cold War containment policy toward the Army After Next. In a time of Cold War and nuclear threat, units, down to company level, were organized as self-sufficient packages. A company commander maintained assets above and beyond the basic warfighting element. A company commander had supply sections, maintenance sections, mess sections, and other support elements for the warfighters, but these support elements have since been consolidated at battalion level, and in some cases, such as mess sections, to brigade level. This is an excellent visual example of the army's choice in centralizing friction within one level. Logistical concerns were shared by commanders at all levels with each echelon working to fix problems and create solutions that were focused upon their immediate and long-term needs, but now the problems have all gravitated to the battalion. The executive officer consequently spends greater amounts of time as a directed telescope by dealing with logistic issues in the unit.

As in the case of the staff, Army doctrine and philosophy conspired against the executive officer by shifting his focus away from the control system and more toward the second in command and directed telescope roles. Herein lies the battle captain. The battle captain was created in response to the loss of executive officer focus on supervision of the tactical operations center, the formal control system, and the staff. The Center for Army Lessons Learned, Newsletter No. 95-7, *Tactical Operations Center (TOC)*, summarizes why battle captains developed at unit level.

The role of the battle captain is similar to that of the XO [executive officer]. The battle captain assists the XO in synchronizing and coordinating the staff's effort. The distinction between the two individuals lies in their level of experience. During the battle, synchronizing and coordinating the staff is normally best served by the XO. During the preparation phase, the battle captain can normally fulfill these duties. Experience at the CTCs [combat training centers] shows that during the battle, the battle captain should focus his efforts on supervising the soldiers within the S3 operations cell, rather than synchronizing the efforts of other staff members.¹⁶

Units created an assistant executive officer in response to the ever-increasing and diversifying duties and responsibilities of the executive officer, but an assistant executive officer that must be prepared to shift alliances back to the S3 during mission execution.

A chart contained in the *Tactical Operations Center (TOC)* newsletter summarizes the lack of a staff's focused effort in the formal control process.¹⁷ Though the chart in figure 6 does not demonstrate the total of the problem among the whole staff, its snapshot of the operations section does demonstrate the lack of clear duties and responsibilities between individuals and the battle captain as an assistant executive officer.

Both the Army and operational units have perpetuated their stop-gap approach to correcting command and control issues by instituting new and unlinked systems, checklists, and processes. Instead of identifying the root causes of command and control problems, the army has thrown solutions against the mere symptoms of the overriding doctrinal and philosophical problems. The control philosophy, contradictory command and control doctrine, and stop-gap solutions collide at the battalion and brigade levels of

¹⁶CALL Newsletter 95-7, III-2.

¹⁷Ibid, III-3.

DUTY POS[ITION] TOC FUNCTION	XO	BATTLE CPT (CAPTAIN)	OPS NCO/ STAFF NCO	RTO	CLERK/ TYPIST
RECEIVE INFORMATION: MONITOR SITUATION RECEIVE MESSAGES/REPORTS MAINTAIN JOURNAL UPDATE POST UNIT LOCATIONS UPDATE STATUS BOARDS/CHARTS	X	X X	X X X X X	X X X X	X X X X
DISTRIBUTE INFORMATION SUBMIT REPORTS PUBLISH ORDERS PASS MESSAGES/REPORTS WITHIN TOC		 X	X X X	X X X	X X X
ANALYZE INFORMATION REVIEW IN/OUT GOING REPORTS/ORDERS CONDUCT PREDICTIVE ANALYSIS IDENTIFY CCIR CONDUCT TDMP SERVE AS RECORDERS DEVELOP TERRAIN SKETCHES PREPARE CHARTS AND OVERLAYS	X X X X	X X X X	X X X X X	 X X X X	 X X X X
MAKE RECOMMENDATIONS TO THE COMMANDER	X	X	X		
INTEGRATE/SYNCHRONIZE RESOURCES	X	X			

Fig. 6. Comparison of duties

operation. The result is an unfocused, untrained staff attempting to do everything and everyone else's job, while living at the central point of consolidated friction.

The problems with the staff are not correctable without a complete review and revision of Army command philosophy and doctrine. Conditions must be established to integrate the staff and develop what Dr. Joseph Olmstead referred to as "teamness" in a research study on battle staff integration. Dr. Olmstead defines the necessary organizational conditions for integration and teamwork as:

1) a clear role system, 2) common superordinate goals, 3) reward system for teamwork and 4) a stable and efficient organizational system. Necessary organizational conditions are conducive to the growth of cohesion and teamwork within a battle staff. These conditions establish an organizational culture which

fosters unity and effective operations. A clear role system exists when "each member of the battle staff knows both his role and those of other members."¹⁸

The current command and control conditions found within brigade and battalion tactical operations centers are in direct violation of the principles laid out by Dr. Olmstead.

Without appropriate change the conditions for teamwork will not exist.

The impact upon the battle captain is yet more extensive. On the unit organizational documents and in garrison, the battle captain is an assistant S3, operations officer. In the field, the battle captain is an assistant executive officer, unless actual operations are occurring, when he reverts to become the assistant operations officer. Hardly does the battle captain meet Olmstead's requirement for a clear role. The role of the battle captain must be looked at in light of two command and control processes: first, the current situation within the Army command and control system, and second, the true nature of the command and control process. Looking at both venues will provide the usefulness of the battle captain today, and in the future.

¹⁸Joseph A. Olmstead, *Battle Staff Integration* (Alexandria, VA: Institute for Defense Analysis, 1992), VI-6, Quoted in Gary G. Sauer, "Battle Staff Integration: The Key to Battle-Tracking in Battalion Command Posts" (Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS, 1996), 17.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Today, an overwhelmed staff, overwhelmed commander, and the clear failure to control information characterize the situation within brigade and battalion tactical operations centers. Since World War II, Army command and control philosophy developed doctrine that focused on control and dehumanized the fundamental human nature of command and control. Systems, processes, and computers contributed to a sterile mechanical environment, combined with a failure to train the staff on command and control, led to an overwhelmed staff, burdened control system, and unclear roles to support the command and control process. The Army failed to integrate mechanical systems and procedures into the tactical operations center, instead it allowed them to become the primary basis of command and control. The staff and commander became subordinated to technological control tools.

The introduction of battle captains into brigade and battalion tactical operations centers was a symptom of the impact that Army doctrine and control philosophy had at the lower levels of command and control. The battle captain became a stop-gap measure, instituted at the unit level, to counter the increased problems associated with a lack of staff training, doctrinal contradictions, and the increase of information and technology in the tactical operations center. The battle captain mitigated the loss of the executive officer within the control system when the executive officer's threefold duties--coordinator and integrator of the staff, second-in-command, and directed telescope--left a void in synchronizing the control system to support the commander.

The lack of brigade and battalion staff functional area training, combined with the effects of increased information through technology, only served to highlight the supervision void left in the control system. Commanders found themselves doing many of the coordination and integration responsibilities that the executive officer was tasked to do. Under these conditions, it is clear how a commander may see the necessity for an internally directed telescope. The commander knew he needed to focus on command, but had no one to supervise the staff effort. However, the operations officer, as the second major in the unit, provided some relief to the commander, but the operations officer's focus on operational issues failed to provide him adequate time to coordinate the staff and develop integrated recommendations. The assistant operations officer or S3 air subsequently inherited the job and the battle captain was born. The battle captain would appear to solve many of the control system problems. The battle captain released the operations officer and commander to return to their doctrinal duties, he enabled the executive officer to concentrate on the second-in-command and directed telescope functions, and he provided a sense of continuity and coordination within the tactical operations center. However, the fix created its own subset of problems, as stop-gap measures often do.

First, the linkage between the executive officer and the battle captain could not be escaped. The battle captain was attending to many of the doctrinal responsibilities of the executive officer, but seldom had the authority to perform them. The battle captain position was much like that of the other staff members; he was their peer, but not a primary staff member. Unless he developed the respect for his position among the other

staff members, the battle captain was unlikely to develop any coordination and integration among the staff. Instead, the staff would look toward the other field grade officer within the staff, the operations officer, to perform this role. The staff sought experience, which could not be found in the battle captain because he seldom had more experience than did the other staff officers. The fact that the operations officer was already busy and could only partially serve to coordinate and integrate the staff, combined with the lack of authority on the part of the battle captain, only served to give the impression that staff coordination and synchronization was occurring. In reality it was not, and the combat training centers constantly highlight this problem.

The next problem is that the battle captain carries even less weight when dealing with the operations officer. In everything but tactical operations, the operations officer is the battle captain's rater. This situation is further aggravated by the unclear position of the battle captain as a compensator for the absence of the executive officer's role. The duty of the battle captain to "assist the XO [executive officer] in synchronizing and coordinating the staff's effort"¹ makes the battle captain an assistant executive officer. However, the document most often referred to as a reference for battle captains, Center for Army Lessons Learned *Newsletter 95-7, Tactical Operations Center (TOC)* states that when the executive officer is in the tactical operations center "the battle captain should focus his efforts on supervising the soldiers within the S3 operations cell, rather than

¹Department of the Army, Center for Army Lessons Learned, *Newsletter 95-7, Tactical Operations Center (TOC)*, (Ft. Leavenworth, KS: CALL, 1995), III-2.

synchronizing the efforts of other staff members.”² The battle captain is not in a position to question or mitigate differences between the operations officer and the other staff members because one minute the battle captain is an assistant executive officer and the next an assistant operations officer.

There is one common theme among articles and nondoctrinal publications addressing the battle captain’s role. This one theme may prove the most useful to battalion and brigade tactical operations centers. The Center for Army Lessons Learned characterizes these as additional battle captain duties of “supervising the efforts of staff NCO’s [noncommissioned officers] within the S3 section; conducting analysis and assessment of available information; assisting in the review and dissemination of information within the TOC [tactical operations center]; assisting in monitoring the location and activities of friendly units; serves as the TOC OIC [tactical operations center officer-in-charge] during the absence of field grade officers.”³

These roles do not carry the precipitant problems of authority and lack of a clearly defined battle captain role. It does provide the battle captain with responsibilities toward the control system in general, while supporting the executive officer’s duties and the staff. The other advantages to an information focused role for the battle captain is the release of other staff members from the collection, dissemination, and reporting duties that detract from their analytical support to the commander. This role also provides the central point for focusing the integration of additional information gathering technology into the

²Ibid.

³Ibid.

command and control system. Finally, it places an officer in a position to control and focus the abundance of information coming into the tactical operations center. Under the current command and control system, it is the role of a battle captain, as an information systems manager, that makes him useful to brigade and battalion tactical operations centers. Now and in the future of near real-time information, the commander can use the battle captain to manage information and support staff analysis, instead of coordinating and integrating the staff. The role of assisting the executive officer in coordination and synchronization of the staff only serves to misdirect the potential advantages of an information manager. The battle captain provides the supervision, coordination, and integration of the noncommissioned officers and enlisted personnel within the tactical operations center. The battle captain focuses their efforts through a complete understanding of the commander's guidance, intent, and leadership style. He monitors the tools and technology in the tactical operations center to provide continuity and control of information. The battle captain's experience, though limited, enables him to decide, not the importance of information, but only which staff members need it in order to perform analysis. Though the battle captain has a warrior name, his usefulness lies in the skills of a systems manager. The battle captain is the chief information management officer.

At this point, it would be appropriate to outline the training, duties, and responsibilities for the chief information management officer, but retitling and focusing the efforts of the battle captain only serve to support the stop-gap purpose for which he was created. His role may be clearer, his authority clarified, and his responsibilities narrowed; however, his full advantages cannot be tapped, nor training and duties narrowed, in light

of the lack of training given other staff positions since staff functional area training removal from officer advanced course programs of instruction in 1974.⁴ The chief information management officer must be looked at in relation to doctrinal and philosophical corrections necessary within the command and control system to attack the actual root causes of the current command and control problems. The chief information management officer does assist with reducing the multiple tasks and the heavy workload doctrinally placed on staff members, and he takes the first steps toward reducing the executive officer's multiple tasks. However, by assuming the tactical operations center officer-in-charge duties and managing information, the chief information management officer does not provide the commander the intangible information to supplement the formal information under the chief information management officer's purview.

To refocus the executive officer on the coordination and integration of the staff and serving as the single voice between the commander and the staff, the executive officer needs to reduce, or eliminate, the directed telescope and second-in-command responsibilities which draw upon his attention. Admittedly, both by position and rank, the responsibility of second-in-command cannot be eliminated. The rededication of the executive officer, as the single voice between the staff and the commander, does reduce the draw on the executive officer's time to perform the second-in-command role. The commander and executive officer are positioned to clearly communicate and share information. Commanders must assume responsibility to inform the executive officer of

⁴Department of the Army, Office of the Deputy Chief of Staff for Personnel, Research Product 94-02, *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers* (Alexandria, VA: ARI, 1993), v.

information received from the commander's directed telescopes. The refocusing of the executive officer onto the formal control system then hinges on the elimination of his role as a directed telescope.

In order to release the executive officer from directed telescope duties, the commander must find other personnel capable of the role. The application of the strategic and operational concept of a formal directed telescope to the tactical level would require additional investigation, but current battalion and brigade commanders do have personnel available and tasked with providing direct information to the commander on intangible information. These are the personal staff members. The unit's chaplain, command sergeant major, and medical officer are not only trained to observe the unit's morale and cohesion, but in the course of their duties they do not carry the rank intimidation factor that a subordinate may associate with the executive officer. In other words, soldiers and subordinate commanders are more likely to talk openly with the personal staff than other members of the command group. Since chaplains, command sergeants major, and medical officers have freedom of movement within the unit, and are already trained in assessing personal and intangible factors, only minimal training is required for them to serve as directed telescopes toward tactical ends; even less so in the case of the command sergeant major. The executive officer is released from the directed telescope role.

The refocusing of the executive officer to the integration and coordination of the staff offers great impact on the overall quality and capability of the formal control system to support the commander with accurate information and recommendations about himself, the enemy, and the environment. The executive officer becomes the supervisor of the

formal control system. He supervises the chief information management officer to ensure that the information management system categories of information flow, handling, and dissemination support the staff's responsibility of analysis. The executive officer supervises the staff's analysis, coordination, and integration to determine its overall relevance to the unit and the mission. Whether this is done through separate staff estimates, the military decision making process, or targeting boards, the executive officer accomplishes his formal control system functions through his higher level of experience, clear understanding of the commander's guidance and intent, and a clear grasp of the command and control process. Finally, the executive officer takes the staff's recommendations, filters it through the commander's critical information requirements, and provides the single staff voice to the commander.

The commander is no longer left to decide which staff member to believe, and when, but only needs to balance the formal information with input from the informal control system to reach his decisions. The commander personally controls the informal control system and employs directed telescopes to provide the him with intangible information about his unit, while the executive officer supervises the formal control system to provide the commander with information and assist with the implementation of the commander's decisions. A command and control system, truly focused upon the needs of the commander, develops. It is a command and control process in which the commander's leadership and decisions are the focus. The establishment of unique and purposeful systems within the command and control process provides for a balance of each system's strengths and weaknesses, enables the commander to place purpose over process, and

allows each member to focus on their specific role in each system. Figure 7 represents the complete command and control process.

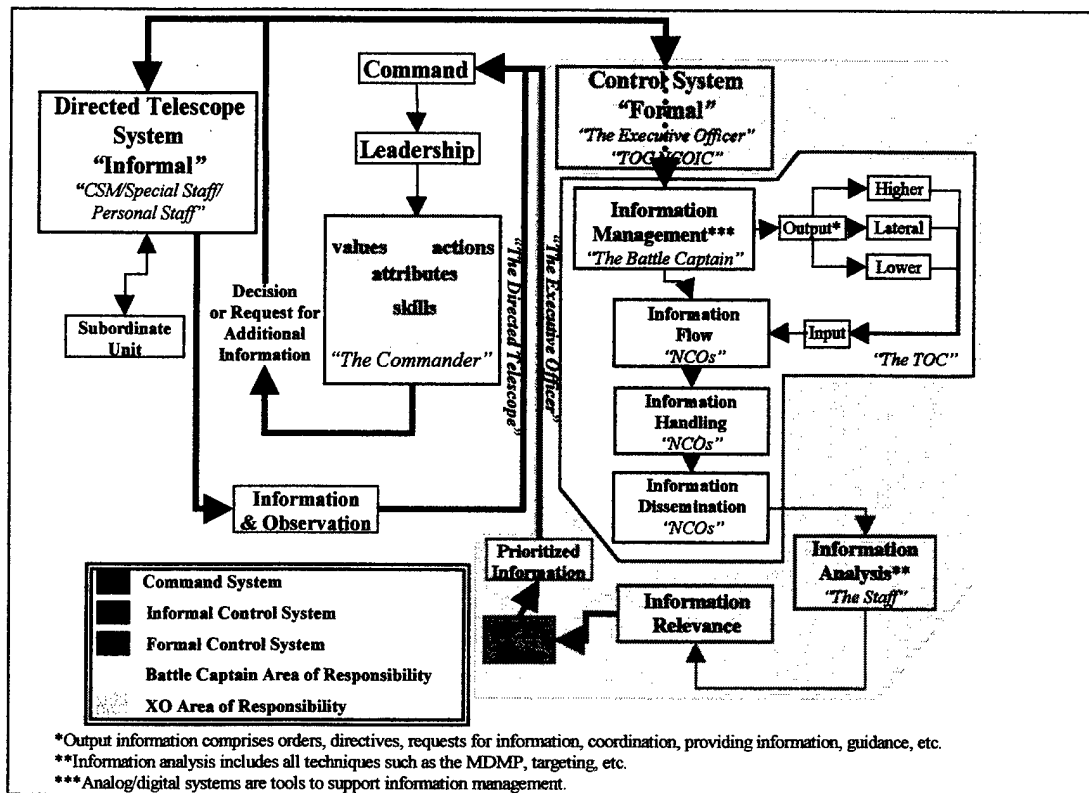


Fig. 7. The Complete Command and Control Process

The first step in clarifying the command and control process is a complete review of Army doctrine. The stop-gap solutions the Army implemented to correct perceived deficiencies resulted in a disjointed and contradictory set of doctrines. New doctrine that: presents the three direct systems within command and control process, recognizes the functions and makeup of the systems, gives the purpose of each system, presents the strengths and weaknesses of each system, and defines staff member support roles will

provide the foundation for developing staffs with a clear understanding of command and control. Doctrine must focus first on the commander as the reason for the command and control process, while maintaining the human aspect through primary discussion of the system based upon the staff members operating it. Checklists and processes must serve only as tools for the staff to achieve their purpose. Finally, doctrine must seek to integrate technology into the whole process, not tailor the process to technology.

Doctrine must account for the unique position of the chief information management officer. By maintaining the assistant operations officer in the chief information management officer position, the unclear role and lack of authority issues remain. The chief information management officer should work directly for the executive officer to solidify the position of information management as a direct supporting element of the formal control system. This position dictates a separate and unique staff position, thus placing the chief information officer on an equal footing with the other staff sections and clarifying his role within the control system. However, the officer must be the same branch as the combat arms unit to ensure he has the technical and tactical background to properly disseminate the information to the staff and interact with subordinate units. The tactical duties of the staff position would solely focus on information management, while the chief information management officer's garrison duties would be that of assistant executive officer, but clearly centered around maintaining the tactical operations center capabilities and garrison management of information.

Finally, doctrine must address the relationship of the noncommissioned officers and enlisted personnel to the chief information management officer. Most of the

noncommissioned officers and enlisted personnel, within the tactical operations center that focus on information, are assigned to the operations section. However, these personnel must fall under the control of the chief information management officer in order for the chief information management officer to provide the supervision, coordination, and integration of effort to manage information. Only those personnel directly associated with the information management function would fall under the chief information management officer's control. Both the staff position of the chief information management officer and operational control of personnel will be necessary as the Army continues its drive toward "knowledge and speed." The shear intensity of information that digital technology systems promise will require a concerted and coordinated information management effort.

Once doctrine is revised, the Army must correct the ongoing, quarter-century deficiency in training officers to serve on battalion and brigade staffs. Each staff officer must understand not only their responsibilities within the command and control process, but the relationship of their role to others.⁵ Officers will inculcate the command and control process while gaining a thorough understanding of each systems strengths and weaknesses.

The mission of the Combined Arms and Services Staff School "is to train officers from the active and reserve components to function as staff officers with the Army in the field" and provides the most appropriate venue for training junior captains to assume

⁵Joseph A. Olmstead, *Battle Staff Integration* (Alexandria, VA: Institute for Defense Analysis, 1992), VI-6., quoted in Gary G. Sauer, "Battle Staff Integration: The Key to Battle-Tracking in Battalion Command Posts" (monograph, School of Advanced Military Studies, Ft. Leavenworth, KS, 1996), 40.

battalion staff positions.⁶ However, the school's current program of instruction offers only generic staff officer's skills, with no instruction on the command and control process or specific staff duties.⁷

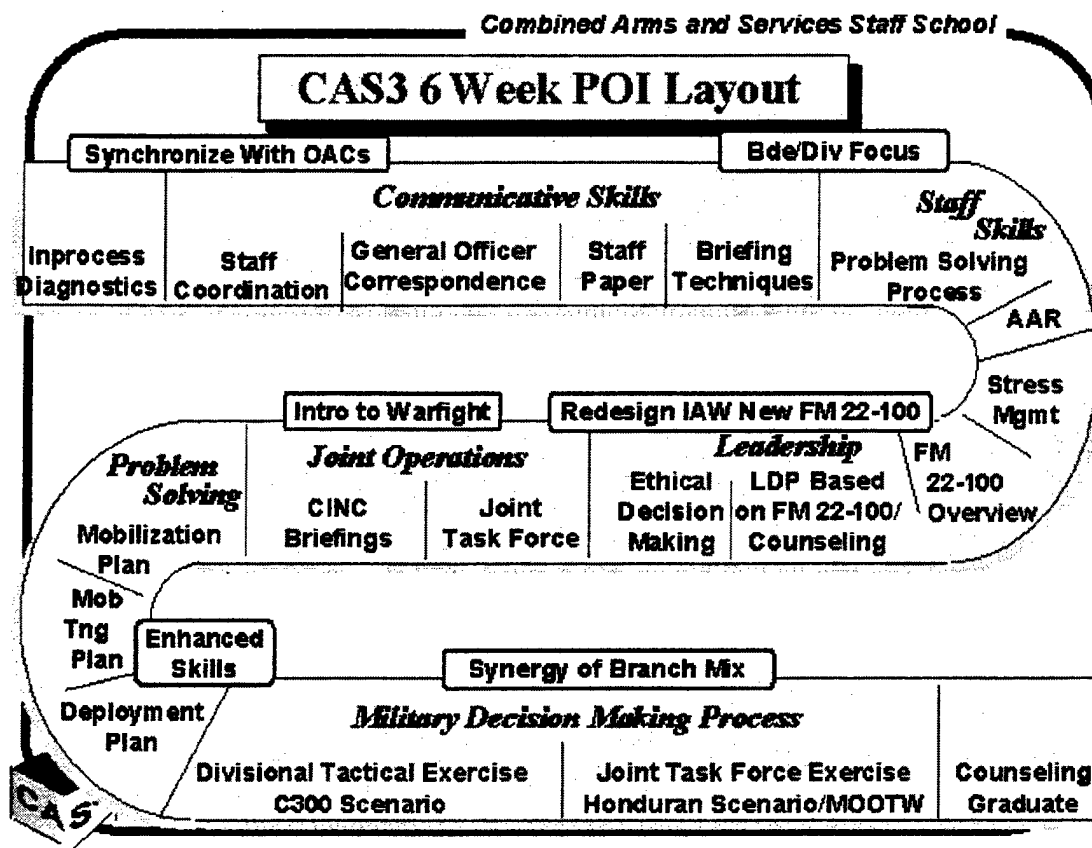


Fig. 8. Combined Arms and Services Staff School program of instruction

⁶U.S. Army Command and General Staff School, Combined Arms and Services Staff School, *Commander's Brief*, [briefing on-line] (Ft. Leavenworth, KS: CAS3, accessed 5 February, 1999); available from <http://www-cgsc.army.mil/cas3/cmdbrf>; Internet.

⁷Ibid.

A program of instruction to support the command and control doctrine would include training on the command and control process and specific staff roles (including chief information management officer). To accommodate those officers that previously attended the Combined Arms and Services Staff School, prior to the program of instruction change, specific training on the command and control process and executive officer responsibilities would require incorporation into the Command and General Staff Officer's Course. If the Army can afford to invest a year of training to prepare majors to perform division and corps level staff operations, it needs to consider a significant increase in preparing captains and senior first lieutenants for battalion and brigade staff.

The risks of not refocusing Army doctrine and training are the perpetuation of the Army's control philosophy, failure to integrate technology into command and control, and complete destruction of information management capabilities within the tactical operations center. The flow of information into the battalion and brigade tactical operations centers will constitute a repetition of the "quantity versus quality" failure of the command system in Vietnam that led to the misdirected telescope. The current Force XXI and Army After Next concepts make this risk real.

The draft version of Field Manual 100-5, *Operations*, does address the proper position for control by stating "control is a process by which a commander, assisted by his staff, organizes, directs, and coordinates the activities of the forces allocated to him."⁸

The manual goes even further by making the mechanical and procedural tools subordinate

⁸Department of the Army, Command and General Staff College. FM 100-5, "Operations" (Initial Draft) (Ft. Leavenworth, KS: USACGSC, 4 April 1997), III-1-9.

to the human side of command and control, stating “the commander and his staff employ common doctrine and use standardized procedures in conjunction with the equipment, communications, and information systems available.”⁹ The draft operations manual does plant the seed for a philosophical command and control change in the Army. However, Force XXI and Army After Next conceptual development and implementation completely opposes the draft operation manual’s doctrine, focusing instead on technology. When studies, like that conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences on *Enhance Performance in Light Infantry Digital Tactical Operations Centers*, are conducted, after the fact, to “access whether current digitization efforts for light forces are addressing the specific needs of light forces” the Army has clearly placed technology and control ahead of human leadership.¹⁰ The Army After Next annual report serves to emphasize the misplaced priority. The Army Chief of Staff and the Commander of the Training and Doctrine Command established the Army After Next Project to “guide future Army research and development programs.”¹¹ Though the Army After Next project does stress the importance of experienced leaders by stating:

One way the Army can achieve and maintain the mental agility necessary for success on tomorrow battlefield is by cultivating mature, highly experienced leaders. Such leaders provide at least four benefits: 1) mastery of increased skill sets; 2) greater experience in both command positions and staffs; 3) a firm foundation from which to exercise battlefield intuition; and 4) the ability to

⁹Ibid.

¹⁰Department of the Army, U.S. Army Research Institute for the Behavioral Sciences, Research Report 1709, *Enhance Performance in Light Infantry Digital Tactical Operations Centers* (Alexandria, VA: ARI, 1997), vii.

¹¹Department of the Army, TRADOC, *Annual Report on the Army After Next Project to the Chief of Staff of the Army* [report on-line], (Ft. Monroe, VA: TRADOC, July 1997, accessed 9 December 1998); available from <http://www.tradoc.army.mil>; internet.

successfully withstand higher levels of stress due to psychological maturity and experience.¹²

It does not provide the means, focus, or emphasis on developing humans in conjunction with the systems. The development of training and doctrine to support systems is secondary. Without the concurrent development of both technology, doctrine, and personnel the complete integration of technology to support, not overwhelm the commander and staff, will not be achieved. To gain true integration between people and technology will require a significant effort to first, and foremost, change Army's continuous development of control philosophy over the last fifty years and bring a balance to command and control; thus, recognizing both the strengths and weaknesses within each. This change enables the development of a command and control process in which technology and soldiers are integrated and one which seeks to maximize the strengths of each system. Doctrine and training will develop staff members that understand command and control and place them in a position to take advantage of the technological tools to gain "knowledge and speed." The growing importance of digital technology and the advantages anticipated from near real-time information requires the designation of a staff officer trained and capable of managing these systems and maximizing their capabilities to support the staff. The usefulness of the chief information management officer will never dissipate, but clearly increases as the Army After Next becomes reality.

¹²Ibid.

<p align="center">Chief Information Management Officer</p> <p>Assists the executive officer by supervising and managing the personnel and tools supporting the information management functions within the tactical operations center in order to ensure the unhindered flow of information, the tracking of information, and the dissemination of information to the appropriate coordinating, special, and personal staff</p>	
Responsibilities	
1.	Ensures the continuous communications with lower, higher, and lateral units.
2.	Supervises all information management personnel within the tactical operations center. Ensures: <ul style="list-style-type: none"> A. The timely submission of reports to/from higher and lower. B. Information is properly handled/posted to enable the proper tracking and immediate recovery of all information. C. Verification of all log entries. D. Communications and automated equipment, and associated support accessories are maintained and operational. E. All information management personnel are trained and knowledgeable in all duties and responsibilities. F. All information management tools are current and available. G. The rapid establishment of information management functions during tactical operations center establishment. H. All shifts are fully manned to conduct information management.
3.	Maintains an in-depth knowledge of the commander's guidance and intent.
4.	Maintains a thorough understanding of current missions and familiarity with future missions
5.	Coordinates with, and assists subordinate and higher units with information requests.
6.	Maintains a complete understanding of the commander's critical information requirements and immediate reports to the executive officer any information meeting the requirements.
7.	Disseminates commander's decisions to lower, higher, and lateral units, as required.
8.	Reviews all incoming information and determines distribution. Records distribution.
9.	Recommends unit standard operating procedures and methods for information management.
10.	Assists the executive officer in the performance of his control system duties.

Fig. 9. Duties and responsibilities of the chief information management officer

To help define the usefulness of the chief information officer, both today and in the future, the specific duties and responsibilities must be addressed (fig. 9). These duties and responsibilities are not much different than a consolidated list developed from duties contained in numerous publications and articles now addressing the battle captain. However, there are three significant changes. First, the responsibility to the executive

officer is established. Second, the responsibilities to the operations officer are eliminated. Finally, it places a single individual in the position to ensure the integration of noncommissioned officers back into tactical operations centers.

Viewed today, the battle captain is useful to brigade and battalion tactical operations center because the position mitigates the current problems associated with command and control. Without any significant changes to the Army's command and control philosophy, the mitigation provided by the battle captain will lessen with the increase of technology, and the resultant deluge of information. Even the battle captain, as a stop-gap measure, will fail under the deluge. The battle captain, reinvented as the unit's chief information management officer, and associated with significant philosophical, doctrinal, and training revisions within the command and control process, will prove invaluable in providing the intermediate control of large volumes of information coming into the Army After Next tactical operations center. The chief information management officer will remove the distracting burdens from the staff and allow the staff time to analyze the increased volume of information. Combined with a trained executive officer, the control process will provide the link between near real-time information, a coordinated and integrated staff effort, and consolidated recommendations to the commander.

If the Army prepares for operations in the twenty-first century, it must seek to correct longstanding errors infused within command and control during the Cold War years. It is time for the Army to institutionalize what units did ten years ago. The battle captain can no longer be left to fend for himself in defining his duties and responsibilities as a figure in implied doctrine. The battle captain can serve as a pivotal addition to a

command and control system focused on collecting and analyzing information quicker than ever before. During the conceptual development of the Army After Next, the Army has an opportunity to stop the swing of the command and control pendulum toward complete control. By addressing the strengths and weaknesses of the command and control process through training, developing clear and supportive doctrine, and providing organizations with dedicated chief information management officers, the Army can integrate technology that supports the commander and empowers him to exercise his leadership skills.

APPENDIX

BRIEFING ON THE STATUS OF BATTLE CAPTAINS

This appendix arose through a request from the Command and General Staff College for a briefing on this thesis. As work on the thesis was nearing completion, the college received a task from the Training and Doctrine Command to look into the current status of battle captains and their training and to provide a course of action correcting any identified issues. As a result, this briefing was presented to the commandant of the college to meet the specified and implied tasks identified in the briefing.

**WHAT NOW, BATTLE CAPTAIN? The Who,
What and How of the Job on Nobody's Books,
but Found in Every Unit's TOC**

**ANALYSIS
OF THE BATTLE CAPTAIN
CURRENT SITUATION**

XX APRIL 1999



*Title of an article written by CPT Marcus de Oliveira appearing in the 2d Quarter, FY 95 Combat Training Center Quarterly Bulletin

THE BATTLE CAPTAIN

SPECIFIED TASKS

- Define the current role of the battle captain and his duties and responsibilities.
- Determine the environment the battle captain works in.
- Determine who is actively working on battle captain issues.
- Determine where and how battle captains are trained.
- Determine the current skills required of a battle captain.
- Analyze battle captain information and trends to ascertain the appropriateness of the current role.
- Define the battle captain role, his environment, and duties and responsibilities within a combined arms arena.
- Develop recommendations to address doctrine, organization, and training.



THE BATTLE CAPTAIN

IMPLIED TASKS

- Define the current problems associated with the battle captain.
- Determine the benefits, strengths, weaknesses, and usefulness of a battle captain.
- Examine developing doctrine, training, and future digital systems to determine their impact upon battle captain development and roles.
- Determine doctrinal, training, and organizational requirements that support a battle captain.
- Provide other recommendations on staff and C² doctrine to ensure integration of the battle captain.



THE BATTLE CAPTAIN ASSUMPTIONS

- Force XXI and Army After Next intend to integrate digital tools into the command and control process.
- The Army will accept doctrinal, organizational, and training changes to accommodate automation integration.
- The battle captain's existence is dependent on his support to the command and control process.
- Like other staff officers, the battle captains role should be applicable across the combined arms spectrum.



THE BATTLE CAPTAIN

RESTATED MISSION

Within a combined arms arena, analyze current doctrine, training, and organizational trends to determine the battle captain's current environment, and duties. Define the battle captain and his environment, role, and supporting responsibilities in order to identify solutions or remedial actions necessary to correct current problems and to provide a common direction of effort.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

Doctrine

- Only one doctrinal reference to a battle captain. **U.S. Army Intelligence Center and Fort Huachuca. Field Manual 34-25-3, *All Source Analysis System and the Analysis and Control Element*, (1995).**

The battle captain supervises the ACE (Analysis and Control Element) analysis, target nomination, collection management, technical control, and dissemination operations during his shift. As a key leader within the ACE, the battle captain ensures subordinate supervisors and analysts are focused on the commander's PIR (Priority Intelligence Requirements) and synchronized with the command's operations. He accomplishes his duties by retaining personal mobility within the ACE, communicating with ACE personnel and other staff elements, and maintaining situation awareness within the ACE. His ability to move freely within the ACE helps him to focus the ACE and apply his knowledge and experience where it can be most beneficial.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

Developing Doctrine

- CADD - Field Manual 100-34-1 (Author's Draft), *Tactics, Techniques, and Procedures for Command Post Operations*.

Assistant Operations Officer (Battle Captain) - The assistant operations officer (battle captain) is the senior operations officer in the main command post during the battle.

His role is similar to that of the *Chief of Staff/XO* in that he assists in the synchronizing and coordinating [of] the staff. The *assistant operations officer* (battle captain) supervises the functioning of the command post during the planning and preparation of an operation allowing the Chief of Staff/XO time to focus on assisting the command with command and control of the unit. During the battle or execution of the operation, the assistant operations officer will focus his efforts on supervising the soldiers and the staff within the operations cell. Battle tasks include:

- Supervising the efforts of the staff NCOs within the operations section.
- Conducting *analysis and assessment* of available information.
- Assisting in the review and dissemination of information within the TOC.
- Assisting in monitoring the location and activities of friendly units.
- Serving as OIC of the command post during the absence of primary staff officers.
- *Assisting the G3 (S3) during the MDMP.*



THE BATTLE CAPTAIN

THE CURRENT SITUATION

Nondoctrinal - The Most Common Reference

- CALL Newsletter 95-7, *Tactical Operations Center (TOC)*.
 - The role of the battle captain is similar to that of the XO. The battle captain assists the XO in synchronizing and coordinating the staff's effort. During the battle, synchronizing and coordinating the staff is normally best served by the XO.
 - During the preparation phase, the battle captain can normally fulfill these duties. . . . During the battle, the battle captain should focus his efforts on supervising the efforts of the soldiers within the S3 operations cell, rather than synchronizing the efforts of other staff members.
 - Additional duties of the battle captain include:
 - Supervising the efforts of the staff NCOs within the operations section.
 - Conducting analysis and assessment of available information.
 - Assisting in the review and dissemination of information within the TOC.
 - Assisting in monitoring the location and activities of friendly units.
 - Serving as TOC OIC of the command post during the absence of field grade officers.
 - Assisting the G3 (S3) during the MDMP.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

Nondoctrinal

- U.S. Army Research Institute for Behavioral and Social Sciences, ARI Field Unit at Fort Benning, Georgia *The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers*, (1993)
 - The S3 Air is located at the main CP and functions as the Battle Captain and XO's deputy.
 - The S3 Air assumes the S3's duties when the S3 is absent in garrison. Tactically, he steps in for the XO at the TOC.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

- No other doctrinal or nondoctrinal references.
- FM 101-5 addresses the duties and responsibilities of all coordinating, special, and personal staff officers, but it does not address the battle captain.
- Doctrinal and nondoctrinal references do not differentiate between division/corps and battalion/brigade battle captains. Most focus at the battalion/brigade level.
- BCTP does not address the division/corps battle captain role.
- The Army OES does not provide any doctrinal training on the complete command and control process.
- CAS³ POI only provides general staff skills.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

- Army OES has not conducted staff functional area training since 1974.
- The MDMP, targeting process, staff estimates, etc. are all techniques for analyzing information.
- Analog and digital technology (radios, computers, MCS, charts, and maps) are all tools that support the TOC's ability to handle the flow of incoming and outgoing information.
- Numerous articles on the battle captain describe a wide range of roles, but all address a lack of doctrine.
- Technology has advanced since World War II, and digitized technology will continue to advance through Force XXI and Army After Next in order to provide near real-time information to gain "knowledge and speed." Information volume will increase.



THE BATTLE CAPTAIN

THE CURRENT SITUATION

WHAT IS A BATTLE CAPTAIN?

- Current common doctrinal and nondoctrinal duties for the battle captain include:

- | | |
|------------------------------------|---|
| – Assistant Executive Officer | –Assistant Operations Officer |
| • Staff coordinator and integrator | • Supervisor of enlisted personnel in the TOC |
| • TOC OIC | • Battletacker |
| • Information Analyst (MDMP, etc) | • Planner |

“Too many responsibilities”

“Too little experience”

The Result

Long-term CTC observations include:

- Failure to utilize NCOs
- Failure to battletack.
- Lack of coordination and integration between staff.
- Staff members often removed from the MDMP.
- Lack of a staff fighter management plan.
- Breakdown in information analysis



THE BATTLE CAPTAIN

THE CURRENT SITUATION

SKILLS REQUIRED OF A BATTLE CAPTAIN

- UNDERSTANDING OF:

- The command and control process
- Command and control tools
- Staff roles and responsibilities
- Executive officer's tactical duties
- Unit operational requirements
- MDMF
- Communications and automated systems
- Commander's intent and guidance

The battalion and brigade battle captain does not have the:

Experience level to coordinate and synchronize the staff

Authority to coordinate and synchronize the staff

Skills to apply commander's intent and guidance to overall unit mission

A division and corps battle captain, as a major, is better able to cope with the role due to a larger degree of experience



THE BATTLE CAPTAIN

THE CURRENT SITUATION

WHO'S WORKING ON BATTLE CAPTAINS? HOW ARE BATTLE CAPTAINS TRAINED?

- **Leadership Training Program, JRTC.** Seeks to incorporate OC observations to prepare units for a JRTC rotation. *Completely focused on information management responsibilities.*
- **Leadership Training Program, NTC.** Seeks to incorporate OC observations to prepare units for a NTC rotation. *Completely focused on information management responsibilities.*
- **Combat Maneuver Training Center.** Seeks to incorporate OC observations to prepare units for a CMTC rotation. *Less than 50% of the POI focused on information management (limited). Remainder is the MDMP.*
- **Infantry Officer Advance Course.** Four hour POI. *Discusses information management as a duty. 80% of the POI is the MDMP.*

OVERALL EFFORT IS DISJOINTED AND LIMITED

Training and standards are left up to units



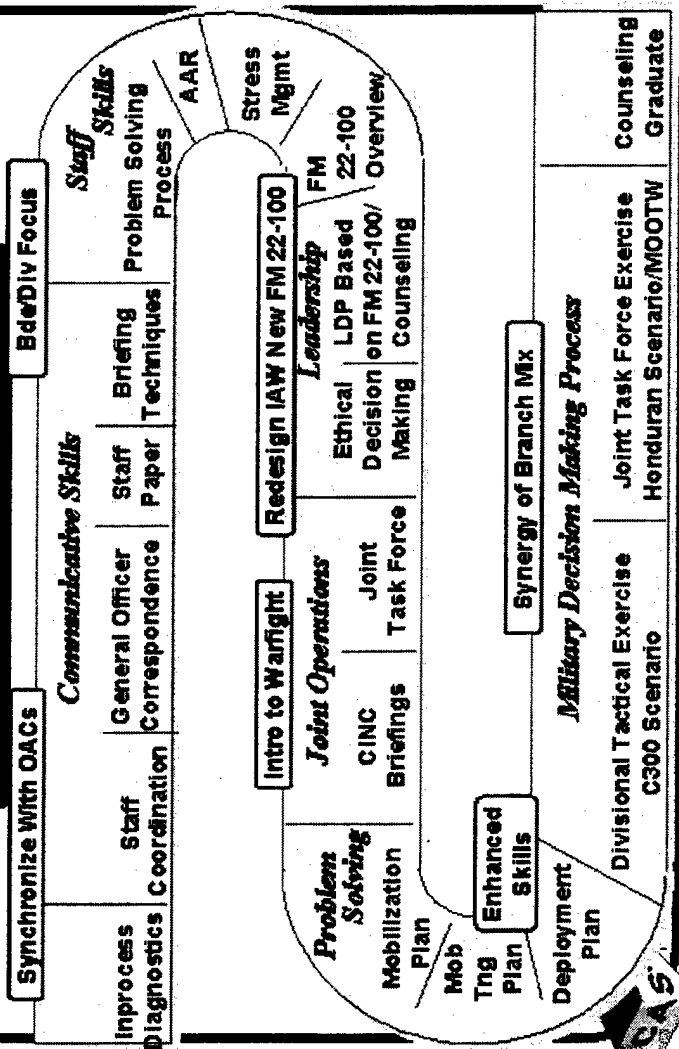
THE BATTLE CAPTAIN

THE CURRENT SITUATION

WHO'S WORKING ON BATTLE CAPTAINS? HOW ARE BATTLE CAPTAINS TRAINED?

Combined Arms and Services Staff School

CAS3 6 Week POI Layout



MISSION

The mission of the Combined Arms and Services Staff School (CAS3) is to train officers of the Active and Reserve Components to function as staff officers with the Army in the field.



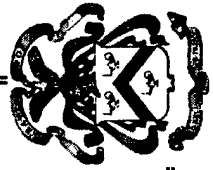
Command and Control - Functional Staff Training?

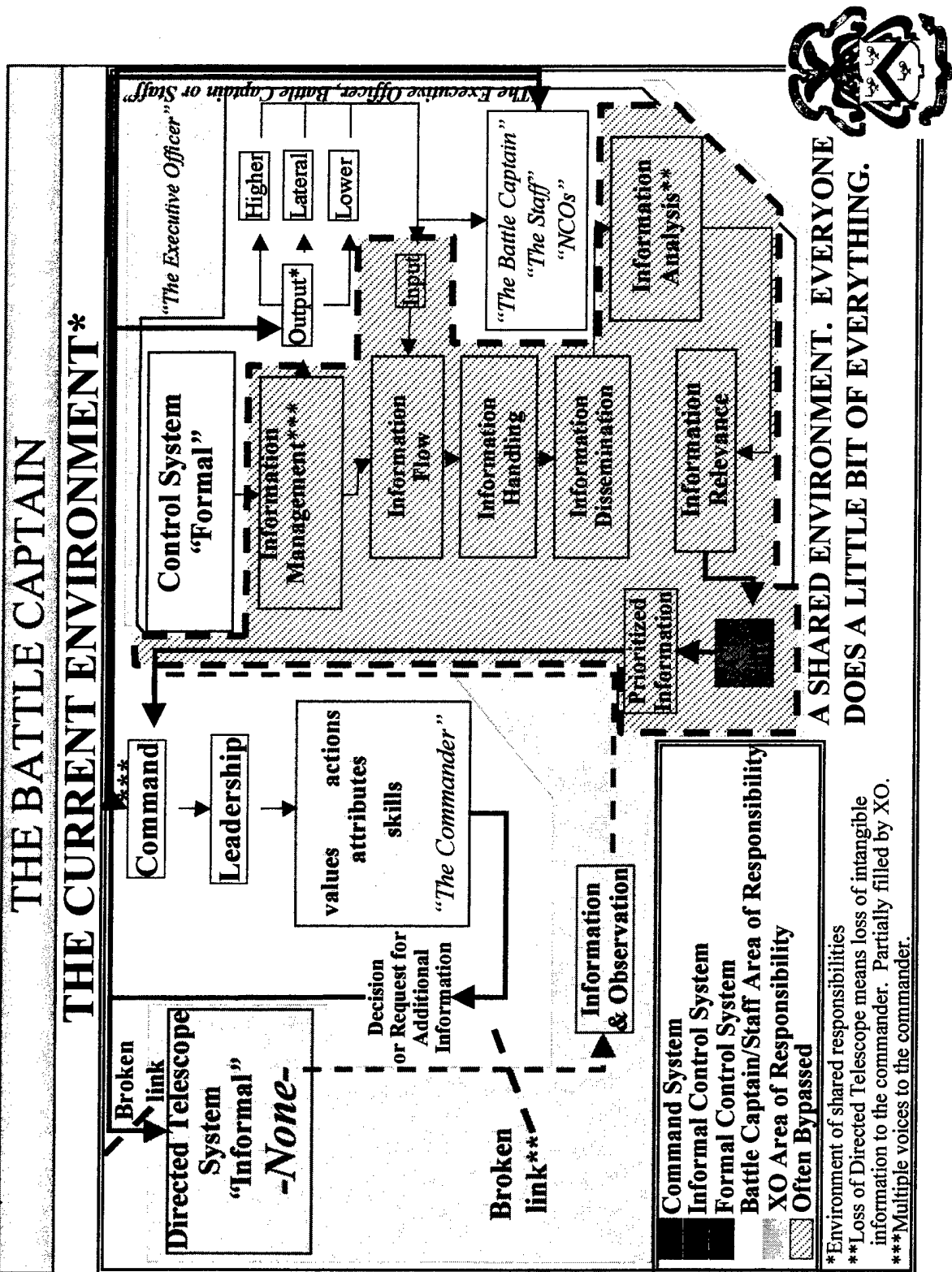
THE BATTLE CAPTAIN

THE CURRENT SITUATION

ASSESSMENT OF OVERALL PROBLEM - HOW WE GOT THERE

- An increase in technology systems, centralization of assets, and lack of understanding the command and control system led to an XO focused on directed telescope and second-in-command roles and a staff unfocused from information analysis.
- Commanders needed help in coordinating and integrating the staff (an internally directed telescope focused toward the staff). First, the operations officer, then battle captain.
- Mitigates loss of XO focus, but a battle captain stop-gap measure created other problems.
 - No authority
 - An unclear role for the battle captain (Asst XO versus Asst S3).
 - A command and control environment of shared responsibilities and unfocused effort.
 - Locally defined standard.
 - Reduced NCO role characterized by a lack of a clear supervisor, lack of utilization, and unclear responsibilities.





THE BATTLE CAPTAIN

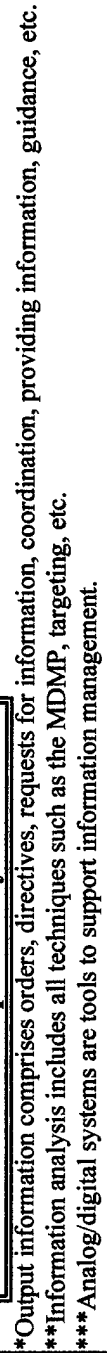
ASSESSMENT OF OVERALL PROBLEM

The current battle captain's role is unclear. It is a symptom of a control philosophy, discrepancies and contradictions within **doctrine**, lack of staff functional and C² **training**, and **organizational** limitations.



**ANALYSIS
OF THE BATTLE CAPTAIN
RECOMMENDATION**





ANALYSIS OF THE BATTLE CAPTAIN

PROPOSED BATTLE CAPTAIN DEFINITION/ROLE

Brigade and Battalion

At brigade/battalion level, the battle captain serves as an assistant executive officer. During tactical operations, the battle captain assists the executive officer, as an assistant TOC Officer-in Charge, by supervising and managing the personnel and tools supporting the information management functions within the tactical operations center. The battle captain ensures the unhindered flow, tracking, and dissemination of information to the appropriate coordinating, special, and personal staff and higher, lower, and lateral units



ANALYSIS OF THE BATTLE CAPTAIN
PROPOSED BATTLE CAPTAIN DEFINITION/ROLE

Corps and Division

At corps/division level, a battle captain serves within each staff or functional area under the supervision of the primary staff officer or functional area chief. The battle captain supervises and manages the personnel and tools supporting the information management functions within the specific staff/functional area of the operations center. The battle captain ensures the unhindered flow, tracking, and dissemination of information within the staff/functional area parallel information system (higher, lower, and lateral echelons), and to the appropriate coordinating, special, and personal staff, and other functional areas. (Field Manual 34-25-3 description of a battle captain in the Analysis and Control Element is an example)



ANALYSIS OF THE BATTLE CAPTAIN

PROPOSED BATTLE CAPTAIN RESPONSIBILITIES

Linked to Tactical Level Army Universal Task List (AUTL)

- Assists the executive officer (brigade/battalion), or primary staff officer and functional area chiefs (corps/division) in the performance of their control system duties. (ART 5.1)
- Ensures continuous communications with lower, higher, and lateral units. (ART 5.1.1, 5.1.2, 5.1.2.1, 5.1.2.2, 5.1.2.3, 5.1.2.4, 5.1.4)
- Supervises all information management personnel. Ensures:
 - The timely submission of reports to/from higher and lower. (ART 5.1.3, 5.1.3.4, 5.1.3.5)
 - Information is properly handled/posted to enable the proper tracking and immediate recovery of all information. (ART 5.1.3.1, 5.1.3.2, 5.1.3.3)
 - Verification of all log entries. (ART 5.1.3.2)
 - Communications and automated equipment, and associated support accessories, are maintained and operational. (ART 5.1.2)
 - All information management personnel are trained and knowledgeable in their duties and responsibilities. (ART 5.1.1)
 - All information management tools are current and available. (ART 5.1.3.2, 5.1.3.3)
 - The rapid establishment of information management functions during tactical operations center setup. (ART 5.1.2.1, 5.1.2.2, 5.1.2.3, 5.1.2.4)
 - All shifts are fully manned to conduct information management. (ART 5.1.3)



ANALYSIS OF THE BATTLE CAPTAIN

PROPOSED BATTLE CAPTAIN RESPONSIBILITIES

Linked to Tactical Level Army Universal Task List (AUTL)

- Maintains an in-depth knowledge of the commander's guidance and intent. (ART 5.2.3.3, 5.2.3.7)
- Executes battle drills in accordance with SOPs, commander's guidance and intent. (ART 5.1.3.4, 5.2.3.3, 5.2.3.7)
- Maintains a thorough understanding of current missions and familiarity with future operations. (ART 5.1)
- Coordinates with, and assists, subordinate, lateral, and higher units with information requests. (ART 5.2.1.2, 5.2.1.1, 5.1.3.4, 5.1.3.5)
- Maintains a complete understanding of the commander's critical information requirements and immediately reports to the XO any information meeting the requirements. (ART 5.1.3.1, 5.1.3.5, 5.2.3.3)
- Disseminates commander's decisions to lower, higher, and lateral echelons, as required. (ART 5.1.1, 5.1.3.4, 5.1.3.5)
- Reviews all incoming information and determines distribution. Ensures information is recorded and distributed. (ART 5.1.1, 5.1.2, 5.1.2.4, 5.1.3.1, 5.1.3.2, 5.1.3.3, 5.1.3.4, 5.1.3.5, 5.2.1.1, 5.2.1.2)
- Maintains a working knowledge of all functional staff roles. (ART 5.1.3.5)
- Recommends unit standard operating procedures and methods for information management. (ART 5.1, 5.1.2)
- Maintains a working knowledge of analog and digital tools. (ART 5.1, 5.1.2)
- Responsible for the integration of new command and control technologies into information management. (ART 5.1, 5.1.2)



ANALYSIS OF THE BATTLE CAPTAIN

PROPOSED BATTLE CAPTAIN TRAINING AND EXPERIENCE

- At battalion and brigade level, the battle captain is an OAC and CAS³ graduated captain having completed the DL Staff Enhancement Training battle captain POI. His functional branch is that of the unit of assignment.
- At division and corps level, the battle captain is a MEL 4 major within the operations section (Main and TAC). Primary staff and functional area battle captains may be either MEL 4 majors or captains meeting the battalion and brigade requirements. The position is not branch specific.



ANALYSIS OF THE BATTLE CAPTAIN

THE ROAD TO IMPLEMENTATION

TRAINING

OAC
CAS³
SET
CGSC

DOCTRINE

FM 100-34
FM 100-34-1
FM 101-5

SHORT-TERM

MID-TERM

ORGANIZATION

MTOE

LONG-TERM

• A TOC CAPABLE OF INTEGRATING TECHNOLOGY AND MANAGING/ANALYZING AN INCREASED VOLUME OF INFORMATION TO SUPPORT FORCE XXI AND AAN

• A COMMAND AND CONTROL ENVIRONMENT WITH CLEAR ROLES AND A FOCUSED STAFF THAT SUPPORTS THE COMMANDER WITH NEAR REAL-TIME, ANALYZED INFORMATION



ANALYSIS OF THE BATTLE CAPTAIN

TRAINING RECOMMENDATIONS

- Add initial training on command and control doctrine/staff functional areas to officer advanced courses to lay a foundation for continued training and prepares captains for duties on a battalion/brigade staff.
- CAS³ continues to teach basic staff skills. Reinforces the command and control doctrine taught in OAC. Develops and implements DL Staff Enhancement Training.
- Require the field to have captains complete specific Staff Enhancement Training module prior to assumption of duties as a staff officer or battle captain.
 - As an interim measure, CGSOC adds doctrinal command and control process training to the leadership POI.

CORRECTS

- An unclear role for the battle captain (Asst XO versus Asst S3).
- A command and control environment of shared responsibilities and unfocused effort.
- Locally defined standard.
- Reduced NCO role characterized by a lack of a clear supervisor, lack of utilization, and unclear responsibilities.

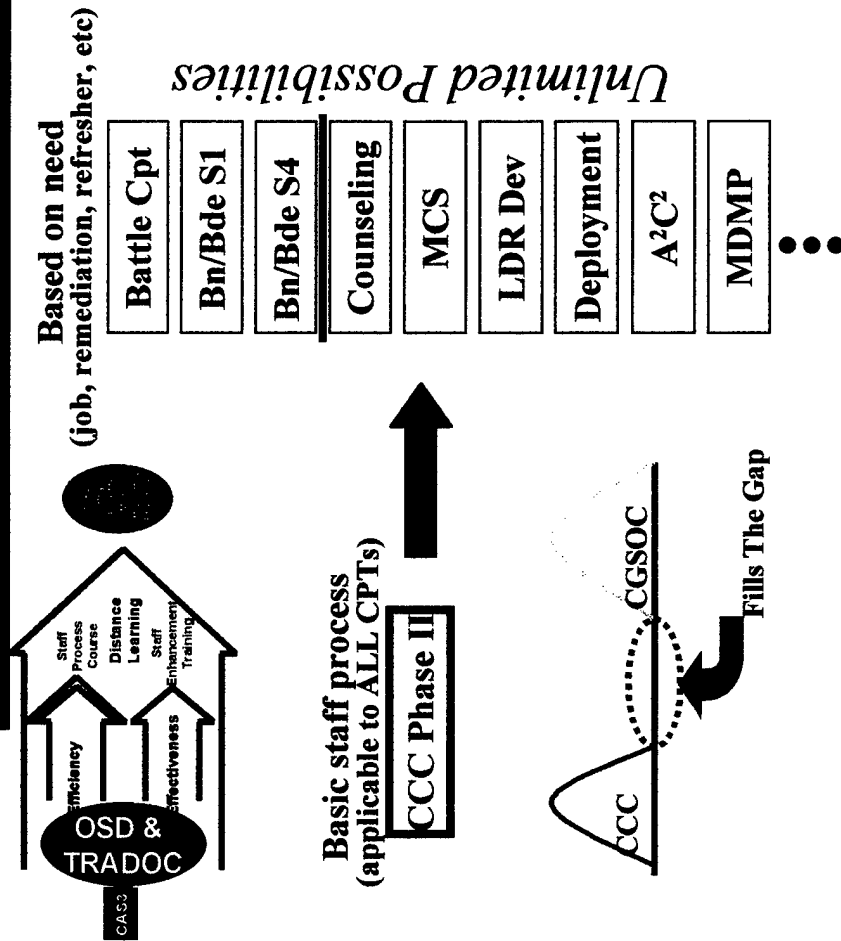
☐ Working



ANALYSIS OF THE BATTLE CAPTAIN

TRAINING RECOMMENDATIONS (cont)

Staff Enhancement Training



Increased Effectiveness
* CPT level common warfighting operational culture

* Increased effectiveness at unit level

CAS3 Environment

* Maintains CAS3 environment (instruction/mentorship/interaction)

* Credible from beginning (credibility of CAS3)

* Reachback (mentorship)

Future Payoffs

* Great potential for quick dissemination of new doctrine

* CGSOC students enter at higher skill level



ANALYSIS OF THE BATTLE CAPTAIN

DOCTRINAL RECOMMENDATIONS

- Continue to develop FM 100-34 and FM 100-34-1 specifically incorporating the command and control process environment, role and responsibilities of the battle captain, and clearly defined roles of all the members in the process.
- Revise FM 101-5 in order to support doctrinal revisions within FM 100-34 and FM 100-34-1. Specifically focus on clarifying the roles and duties of the staff members, add the battle captain, and address NCOs.

CORRECTS

- An unclear role for the battle captain (Asst XO versus Asst S3).
- A command and control environment of shared responsibilities and unfocused effort.
- Locally defined standard.
- Reduced NCO role characterized by a lack of a clear supervisor, lack of utilization, and unclear responsibilities.

☐ Working



ANALYSIS OF THE BATTLE CAPTAIN ORGANIZATIONAL RECOMMENDATIONS

- Recommend further study by FDD for organizational integration method. Possibilities include:
 - Create separate TO&E positions for the battle captain.
 - Establish trailer data (ASI) for a battle captain having completed the Staff Enhancement Training module. Designate an ASI position within the S3 section at brigade/battalion level. Designate ASI positions within corps/division primary staff sections.

CORRECTS

•Lack of authority

☐ Working



MISSION ANALYSIS ON THE BATTLE CAPTAIN
OVERALL RECOMMENDATION
<ul style="list-style-type: none">• That the definition, role, and responsibilities of a battle captain be approved.• That TRADOC establishes an oversight team to coordinate and integrate the recommendations.• That the road to implementation be approved.



MISSION ANALYSIS ON THE BATTLE CAPTAIN

Commander's Decision



BIBLIOGRAPHY

- Abbot, Chris. "Brigade Perceptions: BCTP Warfighters (WFX) and Seminars Before crossing the LD." *CTC Quarterly Bulletin*, 2d Quarter FY95. Ft. Leavenworth, KS: CALL, 1995. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/2QFY95/CTCCHAP5.htm; Internet.
- BDM Management Services Company. *JRTC Training Study: Effective Employment of the TOC NCO*. Ft. Polk, LA: JRTC, 1995.
- Bober, Roger M. "TIC TOCs: Tactical Operation Centers that Run Like Clockwork." *CTC Quarterly Bulletin*, 1st Quarter FY98. Ft. Leavenworth, KS: CALL, 1998. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/97-20/TICTOCS.HTM; Internet.
- Boyes, Jon L., and Stephen J. Androile, eds. *AFCEA/Signal Magazine*, C3I Series, vol. 6, *Principles of Command and Control*. Washington, DC: AFCEA International Press, 1987.
- Braden, John W., and V. Paul Baerman, "The TOC: Backbone of Command and Control," *Military Review* 11 (November 1981): 31-35.
- Coakley, Thomas P. *Command and Control for War and Peace*. Washington, DC: National Defense University, 1992.
- De Landa, Manuel. *War in the Age of Intelligent Machines*. 3d ed. New York: Urzone Inc., 1994.
- De Oliveira, Marcus F. "What Now Battle Captain? The Who, What and How of the Job on Nobody's Books, but Found in Every Unit's TOC," *CTC Quarterly Bulletin*, 2d Quarter FY95. Ft. Leavenworth, KS: CALL, 1995. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/2QFY95/CTCCHAP1.htm; Internet.
- Farago, Ladislav. *Patton: Ordeal and Triumph*. New York: Obolensky, 1964.
- Fontenot, Gregory, Commander, Battle Command Training Program. Interview by author, 18 September 1998, Ft. Leavenworth, KS.
- Franks, Frederick M., Jr., "Battle Command, A Commander's Perspective." *Military Review* 76, no. 3. (May-June 1996): 14-21.
- Fuller, J. F. C. *Generalship: Its Diseases and Their Cure--A Study of the Personal Factor in Command*. Harrisburg, PA: Military Service Publishing Co., 1936.

- Goedkoop, Thomas R. "The Task Force Tactical Operations Center: An Organization for Success." Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS, 27 November 1988.
- Griffin, Gary B. *The Directed Telescope: A Traditional Element of Effective Command*. Ft. Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1991.
- Hughes, Daniel J., ed. *Moltke on the Art of War: Selected Writings*. Novato, CA: Presidio Press, 1995.
- Long, Dennis H. "Command and Control: Restoring the Focus." *Military Review* 11 (November 1981): 44-48.
- McWilliams, Robert. "The Tactical Operations Center Battle Captain in Stability and Support Operations." *Center for Army Lessons Learned, News from the Front*, July-August 1997. Ft. Leavenworth, KS: CALL, 1997. Newsletter on-line. Available from <http://call.army.mil/CALL/NFTF/JULAUG97/ARTICLE4.HTM>; Internet.
- Murphy, Robert. "A Concept for Information Management." *Center for Army Lessons Learned, News from the Front*, May-June 1996, Ft. Leavenworth, KS: CALL, 1996. Newsletter on-line. Available from http://call.army.mil/CALL/NFTF/MAY_JUN.96/MJ96-3.HTM; Internet.
- Oatmeyer, Sean. "Battle Tracking Overlay." *Center for Army Lessons Learned, Training Quarterly*, 1st Quarter FY97. Ft. Leavenworth, KS: CALL, 1997. Quarterly on-line. Available from <http://call.army.mil/CALL/TRNGQTR/TQ1-97/BTLTRCK.HTM>; Internet.
- Olmstead, Joseph A. *Battle Staff Integration*. Alexandria, VA: Institute for Defense Analysis, 1992.
- Rockwell, James M., ed. *AFCEA/Signal Magazine C3I Series*, vol 4, *Tactical C³ for the Ground Forces*. Washington, DC: AFCEA International Press, 1986.
- Rosenfeld, John R. "The S3 Air More Than an Airspace Coordinator," *Infantry* 83, no. 6 (November-December 1993): 13-16.
- Sauer, Gary G. "Battle Staff Integration: The Key to Battle-Tracking in Battalion Command Posts." Monograph, School of Advanced Military Studies, Ft. Leavenworth, KS, 1996.

Scales, Robert H., Jr., Director, Desert Storm Study Project. *Certain Victory: The US Army in the Gulf War*. Ft. Leavenworth, KS: U.S. Army Command and General Staff College Press, 1993.

Spiller, Roger J. "In the Shadow of the Dragon: Doctrine and the US Army After Vietnam." *The Journal of the Royal United Services Institute for Defence Study* 142, no. 6 (1997): 41-54.

Starry, Donn A., "Command and Control: An Overview." *Military Review* 11, (November 1981): 2-3.

Swain, Richard M., "*Lucky War*" *Third Army in Desert Storm*. Ft. Leavenworth, KS: U.S. Army Command and General Staff College Press, 1994; Washington DC: U.S. Army Center of Military History, 1997.

Thomas J. Thompson, George D. Thompson, Robert J. Pleban, and Patrick J. Valentine. *Research Report 1607: Battle Staff Training and Synchronization in Light Infantry Battalions and Task Forces*. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, December 1991.

Tulak, Arthur N. "Command, Control, Communications and Intelligence (C3I) at the Advanced Warfighting Experiment (AWE)," *Center for Army Lessons Learned, News from the Front*, May-June 1997. Newsletter on-line. Available from <http://call.army.mil/CALL/NFTF/MAYJUN97/C3IAWE.HTM>; Internet.

U.S. Department of the Army, Combined Arms Doctrinal Development. FM 100-34-1, "Tactics, Techniques, and Procedures for Command Post Operations" (Draft). Ft. Leavenworth, KS: CADD, October 1998.

U.S. Department of the Army, Center for Army Lessons Learned. "Trends Analysis.4 Command and Control." *CTC Bulletin NO. 97-17, Trends Analysis*, 2nd Quarter FY96 through 2nd Quarter FY97. Ft. Leavenworth, KS: CALL, 1997. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/97-17/TA4N.HTM; Internet.

_____. "Topic: Battle Staff Proficiency," *CTC Quarterly Bulletin NO. 95-11*, 4th Quarter FY95. Ft. Leavenworth, KS: CALL, 1996. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/95-11/CTCS2-8.HTM; Internet.

_____. "Trends Analysis.4 Command and Control BOS." *CTC Bulletin Joint Readiness Training Center Trends*, 4th Quarter FY94. Ft. Leavenworth, KS: CALL, 1995. Bulletin on-line Available from http://call.army.mil/CALL/CTC_BULL/4Q94JRTC/PAGE20.HTM; Internet.

_____. "Trends Analysis.4 Command and Control BOS," *CTC Bulletin National Training Center Trends*, 2nd Quarter FY95. Ft. Leavenworth, KS: CALL, 1995. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/2NTC95/SEC2TA4B.HTM; Internet.

_____. Newsletter 95-7, *Tactical Operations Center (TOC)*. Ft. Leavenworth, KS: CALL, 1995.

_____. Newsletter 95-12, *Tactical Decision Making "Abbreviated Planning"*. Ft. Leavenworth, KS: CALL, 1995.

U.S. Department of the Army, Headquarters, Department of the Army. FM 101-5-1, *Operational Terms and Graphics*. Ft. Monroe, VA: HQDA, 1997.

U.S. Department of the Army, Headquarters, U.S. Army Combined Arms Center. FM 101-5, *Staff Organization and Operations*. Ft. Leavenworth, KS: USACAC, 31 May 1997.

U.S. Department of the Army, Joint Readiness Training Center, Leadership Training Program. "Battle Captains Briefing." Ft. Polk, LA: JRTC, 1998.

U.S. Department of the Army, Office of the Deputy Chief of Staff for Personnel. *Research Product 94-02: The Commander's Battle Staff Handbook: An Introduction to Staff Functional Area Duties for New Battalion Staff Officers*. Alexandria, VA: ARI, 1993.

U.S. Department of the Army, National Training Center, Leadership Training Program. "General Franks on Battle Command." Briefing slides, Ft. Irwin, CA, NTC, 1997.

U.S. Department of the Army, Senior Observer Controllers, Joint Readiness Training Center. "Training Trends and Observations," *CTC Quarterly Bulletin NO. 94-1*. Ft. Leavenworth, KS: CALL, 1994. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/94-1/94-1P1B.htm; Internet.

_____. "Training Trends and Observations," *CTC Quarterly Bulletin NO. 95-1*. Ft. Leavenworth, KS: CALL, 1995. Bulletin on-line. Available from http://call.army.mil/CALL/CTC_BULL/95-1/jrtc.htm; Internet.

U.S. Department of the Army, Small group instructor's teaching packet, Infantry Officer Advanced Course. Ft. Benning, GA: IOAC, 25 June 1997. Obtained by the author from a former advance course instructor, November 1998.

U.S. Department of the Army, TRADOC *Annual Report on the Army After Next Project to the Chief of Staff of the Army*. Ft. Monroe, VA: TRADOC, July 1997. Report on-line. Available from <http://www.tradoc.army.mil>; internet.

U.S. Department of the Army, U.S. Army Command and General Staff College. FM 100-5, *Operations*. Ft. Leavenworth, KS: USACGSC, 1993.

_____. FM 100-5, "Operations" (Initial Draft). Ft. Leavenworth, KS: USACGSC, 4 April 1997.

_____. FM 22-100, "Army Leadership" (revised final draft). Fort Leavenworth, KS: USACGSC, 1998).

U.S. Department of the Army, U.S. Army Command and General Staff College, Combined Arms and Services Staff School. *Commander's Brief*. Ft. Leavenworth, KS: CAS3, 1998. Briefing on-line. Available from <http://www-cgsc.army.mil/cas3/cmdbrf>. Internet.

U.S. Department of the Army, U.S. Army Command and General Staff School. FM 101-5, "Command and Staff Principles" (Tentative). Ft. Leavenworth, KS: The Command and General Staff School Press, 1937.

U.S. Department of the Army, U.S. Army Infantry Center and U.S. Army Armor Center. FC 71-6, *Battalion and Brigade Command and Control*. Fort Benning, GA: USAIC, 1985.

U.S. Department of the Army, U.S. Army Intelligence Center and Fort Huachuca. FM 34-25-3, *All Source Analysis System and the Analysis and Control Element*. Fort Huachuca, AZ: USIC, 1995.

U.S. Department of the Army, U.S. Army Research Institute for the Behavioral Sciences. *Research Report 1709: Enhance Performance in Light Infantry Digital Tactical Operations Centers*. Alexandria, VA: ARI, 1997.

_____. *Research Report 1697: Brigade Battle Staff Training System*. Alexandria, VA: ARI, 1996.

van Creveld, Martin, *Command in War*. Cambridge, MA: Harvard University Press, 1985.

_____. *The Training of Officers*. New York: The Free Press, 1990.

von Clausewitz, Carl. *On War*. Translated by Colonel J.J. Graham, vols 1-3. London: Kegan Paul, Trench, Trubner & Co., Ltd., 1908.

INITIAL DISTRIBUTION LIST

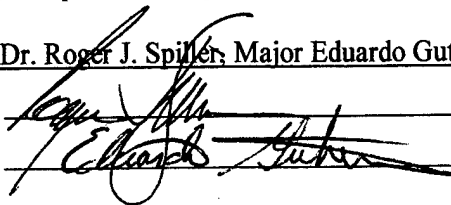
1. Combined Arms Research Library
U.S Army Command and General Staff College
250 Gibbon Ave.
Fort Leavenworth, KS 66027-2314
2. Defense Technical Information Center/OCA
8725 John J. Kingman Rd., Suite 944
Fort Belvoir, VA 22060-6218
3. Dr. Roger J. Spiller, Ph.D.
George C. Marshall Professor of Military History
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
4. Major Eduardo Gutierrez
Center for Army Tactics
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
5. Major Michael Porch
Combined Arms Doctrine Directorate
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
6. Mr. William Conner
Combined Arms Doctrine Directorate
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
7. LTC Frank Colletti
Combined Arms Services Staff School
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352

8. LTC Thomas Graham
Center for Army Leadership
U.S Army Command and General Staff College
250 Gibbon Ave.
Fort Leavenworth, KS 66027-2314
9. LTC Patrick Warren
Center for Army Tactics
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352

CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

1. Certification Date: 19 March 1999
2. Thesis Author: Craig A. Engel
3. Thesis Title: The Role of Battle Captains in Brigade and Battalion Tactical Operations Centers
4. Thesis Committee Members: Dr. Roger J. Spiller, Major Eduardo Gutierrez

Signatures:



5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

(A) B C D E F X SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, You must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution on Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow the example format shown below:

EXAMPLE

<u>Limitation Justification Statement</u>	<u>Chapter/Section</u>	<u>Page(s)</u>
Direct Military Support (10)	/ Chapter 3 /	12
Critical Technology (3)	/ Section 4 /	31
Administrative Operational Use (7)	/ Chapter 2 /	13-32

Fill in limitation justification for your thesis below:

<u>Limitation Justification Statement</u>	<u>Chapter/Section</u>	<u>Page(s)</u>
/	/	
/	/	
/	/	
/	/	

7. MMAS Thesis Author's Signature: _____

STATEMENT A: Approved for public release; distribution is unlimited. (Documents with this statement may be made available or sold to the general public and foreign nationals.)

STATEMENT B: Distribution authorized to US Government agencies only (insert reason and date ON REVERSE OF THIS FORM). Currently used reasons for imposing this statement include the following:

1. Foreign Government Information. Protection of foreign information.
2. Proprietary Information. Protection of proprietary information not owned by the US Government.
3. Critical Technology. Protection and control of critical technology including technical data with potential military application.
4. Test and Evaluation. Protection of test and evaluation of commercial production or military hardware.
5. Contractor Performance Evaluation. Protection of information involving contractor performance evaluation.
6. Premature Dissemination. Protection of information involving systems or hardware from premature dissemination.
7. Administrative/Operational Use. Protection of information involving restricted to official use or for administrative or operational purposes.
8. Software Documentation. Protection of software documentation--release only in accordance with the provisions of DoD Instruction 7930.2.
9. Specific Authority: Protection of information required by a specific authority.
10. Direct Military Support. To protect export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize a U.S. military advantage.

STATEMENT C: Distribution authorized to U.S. Government agencies and their contractors: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT D: Distribution authorized to DoD and U.S. DoD contractors only: (REASON AND DATE). Currently most used reasons are 1, 3, 7, 8, and 9 above.

STATEMENT E: Distribution authorized to DoD only; (REASON AND DATE). Currently most used reasons are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

STATEMENT F: Further dissemination only as directed by (controlling DoD office and date), or higher DoD authority. Used when the DoD originator determines that information is subject to special dissemination limitation specified by paragraph 4-505, DoD 5200.1-R.

STATEMENT X: Distribution authorized to US Government agencies and private individuals of enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25; (date). Controlling DoD office is (insert).