THE MODULAR NEED FOR THE DIVISION SIGNAL BATTALION

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ABSTRACT

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The purpose of the study is to understand the roles of leader development in the generation of a competent tactical signal force. The research is significant as it provides insight into the challenges the Signal Corps has experienced since the advent of the Army's modularity concept with a specific focus at the Brigade Combat Team. The research question is: How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations? This qualitative research study uses a comparative case study methodology. The Army Leader Requirements Model of Leads, Develops, and Achieves is the theoretical framework used to examine the role leader development has in ensuring the training and technical competency of tactical signal forces. Three case studies which analyze the signal leader development are pre-modular, modular, and Division Signal Battalion pilot program. Each case study is used to answer the secondary research question, before answering the primary research question.

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ACRONYMS

ALRM	Army Leader Requirements Model
BCT	Brigade Combat Team
BEB	Brigade Engineer Battalion
BSB	Brigade Support Battalion
BFT	Blue Force Tracker
CTC	Combat Training Center
DSB	Division Signal Battalion
FBCB2	Force XXI Battle Command Brigade and Below
FM	Frequency Modulation
LARC	Leadership Attributes and Competencies Reference Card
MSE	Mobile Subscriber Equipment
NTC	National Training Center
RSTA	Reconnaissance, Surveillance, and Target Acquisition
RWI	Radio-Wire Integration

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CHAPTER 1

INTRODUCTION

Introduction

> Communicating derives from a Latin word which carries dual meanings of transmitting and sharing. Merely sending a message and receiving an acknowledgment is not communicating. Communication is a vital part of combat and combat is a team job.[1]
>
> — General Charles R. Myer

The U.S. Army Signal Corps had the lowest selection rate for promotion to Major within the Army competitive category for fiscal year 2016 with a selection rate of 57.9 percent.[2] The average selection for promotion to Major within the operations support division, of which the Signal Corps is a basic branch, was 70.8 percent.[3] The primary contributing factor for an officer's selection for promotion is the quality of his officer evaluation reports over the course of his career. Within those reports, the rater's comments speak to the Army Leadership Requirements Model (ALRM).[4] The senior

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[1] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Department of the Army, 1982), 73, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[2] U.S. Army Human Resources Command, "FY16, Major, Army Competitive Category, Promotion Selection List Statistics by Control Branch," Human Resources Command, 2016, accessed March 2, 2017, https://www.hrc.army.mil/site/protect/assets/directorate/TAGD/FY16_Major_ACC_%20Stats.pdf.

[3] Ibid.

[4] Department of the Army, DA Form 67-10-1, *Company Grade Plate (O1 - O2 - O3; WO1 - CW2) Officer Evaluation Report* (Washington, DC: Government Printing Office, 2015), accessed March 21, 2017, http://www.apd.army.mil/pub/eforms/DR_a/pdf/DA%20FORM%2067-10-1.pdf.

rater's responsibility is to, "assess and evaluate the abilities and/or [sic] potential of the rated Soldier about his or her contemporaries."[5] The senior rater assesses the officer's abilities by written comments to describe of the officer regarding enumeration (if appropriate), displayed competence, and the potential for continued service.

Clearly, there is a disparity in promotion rates of the Signal Corps when compared against the other basic branches. An initial reaction to this difference could be that a problem of technical competency currently afflicts the officers within the Signal Corps. This research argues that the promotion rate is a sign that is not indicative of a lack of technical competence of these officers, but rather a lack leader development. The research intends to prove this by conducting scholarly qualitative research using the comparative case study method. This methodology seeks to understand how leader development of signal officers has been affected the by the implementation of the Army's modular force structure.

The first part of the research will focus on defining and providing an example of the role the Division Signal Battalions and the Division Signal Battalion Commander has in leader development. The second portion of the research will discuss how the lack of signal leader development since the advent of modularity has impacted the tactical signal force. The third and final portion of the thesis will examine how the Army's ongoing Division Signal Battalion pilot program could improve the leader development of signal officers.

[5] Department of the Army, Army Regulation 623-3, *Evaluation Reporting System* (Washington, DC: Government Printing Office, 2015), 19.

The study will use the ALRM, core leader competencies of Leads, Develops and Achieves as the theoretical framework.[6] This theoretical framework will allow the research to be sufficiently coded to provide, "a summative, salient, essence-capturing, and/or [sic] evocative attribute for a portion of language-based... data."[7] In other words, this research will analyze previously written documents and interviews as data to come to a reasonable conclusion. Through the use of coding, the research will effectively compare three case studies. The case studies are primarily bounded by examination of signal officer leader development within the pre-modular force structure, the modular force structure, and the Division Signal Battalion pilot program.

The intent coding of the research is not to simply summarize the findings but also to, "reflect and expound upon them."[8] This reflection and expansion from the coding of the research findings will occur as part of series of analytical essays for each case study. In each essay, the theoretical framework categorizes the findings and analyzes them to expand on them. It is with these findings and subsequent analysis that the case studies shape the answer to the three secondary research questions in order finally answer the primary research question of: "How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations?"

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[6] Department of the Army, Army Doctrine Reference Publication 6-22 *Army Leadership* (Washington, DC: Government Printing Office, 2012), 1-4.

[7] Johnny Saldana, *The Coding Manual for Qualitative Researchers*, 3rd ed. (Thousand Oaks, CA: Sage Publications, 2016), 3.

[8] Ibid., 45.

Background

The desire to conduct this research stems from my time in various signal positions across Network Enterprise Technology Command (NETCOM), Forces Command, (FORSCOM) and Special Operations Command (SOCOM). My combat tours to Iraq and Afghanistan were both as a Battalion S6. In both experiences, the majority of learning occurred via discovery, individual research, and simply by making the wrong choices. Although I had outstanding mentors during both deployments who wanted to me to be successful, there was not always senior signal mentor I was able to turn to for advice on best business practices of leading a technically focused branch such as the Signal Corps. Much like Proverbs, Chapter 27, verse 17 says, “iron sharpens iron, so one man sharpens another.” The signal officer sharpening experience was not primarily by other men. My operational experiences, marked by failures, sharpened me while supporting modular units.

Where my technical acumen and tactical signal expertise has always been affected the greatest is when my fellow signal officers surrounded me and we learned from one another. I assessed that my overall skills become the most developed while I was in Signal Battalions, attending the Signal Captains Career Course, or within a group of signal officers during Command and General Staff College. A senior signal leader always shepherded These occurrences. These senior signal leaders would have similar experiences and could relate to the challenges being discussed. These were the times when signal officers exchanged ideas and methods instead of operating solely on our individual experiences and biases. It was within these groups that we developed together as leaders.

Leader development has played a critical role in my career thus far. I also realize that not all signal officers have been so fortunate to have the same range of experiences as I have had during my first ten years in the Army. The Division Signal Battalion pilot program I believe represents an opportunity to address a gap leader development caused the Army's modular force structure and the resulting Signal Corps organizations that support it.

Purpose

The purpose of this qualitative research case study is to understand the role signal senior leaders and their staff have in the development of emerging leaders who support the tactical force. The goal of Army's modular force structure was to create a force that was, "more deployable, more agile, more versatile, more lethal, more survivable, and more sustainable."[9] The signal companies organized under the Division Signal Battalion reorganized under the Brigades to support this force structure.[10] The Division Signal Battalions inactivated shortly after that.[11] The former Division Signal Battalion Commanders and staff were either reassigned or became part of the Division G6 staff.

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[9] Stuart E. Johnson et al., *A Review of The Army's Modular Force Structure* (Santa Monica, CA: RAND Corporation, 2011), 9, accessed January 20, 2017, http://www.rand.org/pubs/technical_reports/TR927-2.html.

[10] Department of the Army, Army Regulation 220-5, *Designation, Classification, and Change in Status of Units* (Washington, DC: Government Printing Office, 2003). See AR 220-5, Table 1-1 and Glossary for a complete definition of terms of organize, reorganize, activate, and inactivate in regards to the U.S. Army units designation, classification, and status.

[11] Department of the Army, FM 11-50, *Combat Communications within the Division* (Washington, DC: Government Printing Office, 1977), G-1.

The Division and Corps G6 inherited the role from the Division Signal Battalion of, "advising the Division Commander, staff, and subordinate Commanders on communications . . . , technical guidance, and training readiness responsibilities."[12] The Division and Brigade Signal Companies now became the primary executors in establishing the tactical communications transmissions systems of the network by providing, "communications support of the signal system networks for Stryker Brigade Combat Teams, infantry/armored [sic] Brigade Combat Teams, and supported multi-functional Brigades."[13] The Battalion Commander of the Brigade Special Troops Battalion provided the leader development to the Brigade Signal Company Commander.[14] Later, the Battalion Commanders of the Brigade Engineer Battalion would develop these Signal officers.[15]

Problem Statement

The problem is the Army's modularity force structure has compromised the leader development of the company grade signal officer. The gap in the current literature is the

[12] Department of the Army, FM 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-4.

[13] Ibid., 2-3

[14] Department of the Army, "Mission Table of Equipment, Special Troops Battalion, 3rd BCT, 3rd Infantry Division," Force Management System, 2013, accessed April 16, 2016, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=87305RFC31&CCNUM=0213&DOCST=H&UIC=WJJLAA&EDATE=5/16/2013.

[15] Department of the Army, "Mission Table of Equipment, 23rd Engineer Battalion," Force Management System, 2016, accessed April 16, 2016, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=05315KFC25&CCNUM=0118&DOCST=A&UIC=WAZ7AA&EDATE=1/16/2018.

lack of scholarly examination of how the inactivation of Division Signal Battalions in support of the modular force structure has impacted the leader development of signal officers.

Significance of the Problem

Before modularity, "Corps and Division Signal Battalions provide[d] service to subscribers in their assigned areas." [16] In other words, based upon the Divisional area of operations, a Brigade would request signal support through the Division headquarters and to the Division Signal Battalion. The Brigades would be supported based upon their identified, "communications requirements, . . . [and] on command guidance in conjunction with SYSCON [systems control], to determine which headquarters [would] receive support."[17] Based on these three factors, the signal force attached to support a Brigade may have been an entire Signal Company or only small signal team.

In 2003, the Army began to implement the modular force structure.[18] Under this force structure, Brigades would now become Brigade Combat Teams (BCT) and be classified as units of action (UA).[19] Corps and Divisions would be classified as units of

[16] Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Department of the Army, 1999), 4-2.

[17] Ibid.

[18] Stuart E. Johnson et al., *A Review of The Army's Modular Force Structure* (Santa Monica, CA: RAND Corporation, 2011), iii, accessed January 20, 2017, http://www.rand.org/pubs/technical_reports/TR927-2.html.

[19] Ibid., 49.

employment (UE) to serve as operational headquarters.[20] The BCTs operating within the UA structure the would now have, "units organic to the BCT that formerly had been owned by the Division . . . most notably a RSTA [reconnaissance, surveillance, and target acquisition] squadron, an artillery Battalion, a Brigade Special Troops Battalion, and a Brigade support Battalion"[21]. "The Brigade Special Troops Battalion provide[d] command-and-control capabilities, a fire support element, an MP Platoon, a Signal Company and a Military Intelligence Company."[22] Because of this force structure alignment, the primary role of leader development of signal officers within the Brigade now rested with their respective Battalion Commanders.

The Special Troops Battalion Commander's position was coded O1A, or branch immaterial so a signal officer could still be as the Battalion Commander.[23] In 2015 and 2016, the Special Troops Battalions began their conversion to Brigade Engineer Battalions.[24] With this conversion, only executive officer position remained as an O1A

[20] Ibid.

[21] Ibid., 21.

[22] Ibid., 32.

[23] Department of the Army, "Mission Table of Equipment, Special Troops Battalion, 3rd BCT, 3rd Infantry Division," Force Management System, 2013, accessed April 16, 2016, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=87305RFC31&CCNUM=0213&DOCST=H&UIC=WJJLAA&EDATE=5/16/2013.

[24] Center for Army Lessons Learned, *The Brigade Engineer Battalion: A Leader's Guide* (Fort Leavenworth, KS: Government Printing Office, 2015), iii, accessed April 16, 2017, http://usacac.army.mil/sites/default/files/publications/15-12_0.pdf.

coded position. The Battalion Commander position was coded as a 12A or an engineer officer. [25]

Because of these organizational challenges, the Chief of Staff of the Army directed the establishment of "three signal force pilots to determine if force structure and relationships would improve delivery of the network and better enable mission command."[26] These efforts would be part of the Army Warfighting Challenge (AWFC) number 20, "to develop capable formations."[27] The current challenges associated with the existing force structure according to the problem statement include: "interoperability, execution of the full range of signal and cyber security operations, and integration into the [Department of Defense Information Network] DoDIN."[28]

One of the proposed force structure solutions is the Division Signal Battalions.[29] The reactivation of the 123rd Division Signal Battalion (Provisional) within the 3rd Infantry Division supports this signal force pilot. The Division Signal Battalion structure

[25] Department of the Army, "Mission Table of Equipment, 23rd Engineer Battalion," Force Management System, 2016, accessed April 16, 2016, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=05315KFC25&CCNUM=0118&DOCST=A&UIC=WAZ7AA&EDATE=1/16/2018.

[26] Army Capabilities Integration Center, "AWFC #20 Information Paper," (Washington D.C.: U.S Department of the Army, 2016), 15.

[27] Army Capabilities Integration Center, "Army Warfighting Challenges," accessed April 16, 2017, http://www.arcic.army.mil/Initiatives/ArmyWarfighting Challenges.

[28] Colonel Robert L. Edmonson II, "Signal Operations" (Brief, P943 Course, Command and General Staff College, Fort Leavenworth, KS, July 18, 2016), Slide12.

[29] Ibid.

is currently being assessed to determine if it offers the best solution to help solve the previously mentioned challenges caused by the current modular force structure alignment.[30] The reintroduction of the Division Signal Battalion also reintroduces a senior signal officer to the force structure to shape the leader development of signal officers at the Brigade and below the level.

The Research Question

The primary research question is: How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations?

The secondary research questions are:

1. What roles in leader development did the Division Signal Battalion fulfill before it was inactivated to support modularity?

2. How has the lack of signal leader development since the advent of modularity impacted the tactical signal force?

3. How does the 3rd Infantry Division's Signal Battalion (Provisional) propose to improve signal leader development?

Methodology

This qualitative research study uses the comparative case study methodology first to answer the three secondary research questions. The research, analysis, and findings that answer the secondary research questions will then be synthesized to answer the

[30] Ibid.

primary research question. The research is qualitative in nature because the intent is to associate terms, "with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world order."[31] In other words, the research intends to study the recorded observances of how the signal officer's leader development has been affected by the modular force. To understand how greatly or to what degree leader development has been affected, the comparative case study methodology will be used.

The research will use the case study methodology to "[develop] an in-depth analysis."[32] By exploring a topic deeply, the research seeks to understand the true nature of the problem researched. The goal of the case study methodology is to, "investigates a contemporary phenomenon within its real-life context."[33] The results from this tradition will analyze the data from multiple sources allowing the direct comparison of the results of signal officer leader development through three case studies. These case studies focus on the signal leadership development and how it occurred in the pre-modular force structure, during modularity, and the signal pilot Division Signal Battalion.

The theoretical framework is derived from the Army's doctrinal reference publication on leadership and uses the logic model of the ALRM.[34] To focus the scope of

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[31] John Van Maanen, "Reclaiming Qualitative Methods for Organizational Research: A Preface," *Administrative Science Quarterly* 24, no. 4 (1979), 520.

[32] John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Traditions* (Thousand Oaks, CA: Sage Publications, 1998), 65.

[33] R. E. Stake, *The Art of Case Study Research* (Thousand Oaks, CA: Sage Publications, 1995), 18.

[34] Department of the Army, Army Doctrine Reference Publication, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-4.

this research only the Core Leader Competencies of Leads, Develops, and Achieves from the ALRM will be used as the theoretical framework. [35]

The theoretical framework also serves as the basis in the analyzation of the data through the use axial coding. The use of coding is significant as it allows familiar terms to, "make meaning but escape the full description" of the events described from the source documents.[36] In other words, the use of axial coding assists in the familiarization and helps abbreviate the understanding of the source material during the analysis.

The study will use two of the six types of data recommended by Robert Yin. Yin recommends collecting data for qualitative research via, "documentation, archival records, interviews, direct observations, and physical artifacts."[37] The two methods of data collection for this research will be the analysis of documentation and a semi-structured interview.

The final goal of this research methodology is to provide synthesis and interpretation of "how the individual components of study weave together" [38] For this particular study those individual components are the case studies framed by the

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[35] Ibid.

[36] Matthew Fuller and Olga Goriunova, "Phrase," in *Inventive Methods: The Happening of the Social,* ed. Celia Lury and Nina Wakeford (New York, NY: Routledge, 2014), 168.

[37] Robert K. Yin, *Case Study Research: Design and Methods,* 5th ed. (Thousand Oaks, CA: Sage Publications, 2014), 105.

[38] Johnny Saldana, *The Coding Manual for Qualitative Researchers,* 3rd ed. (Thousand Oaks, CA: Sage Publications, 2016), 48.

secondary research questions that will weave together to answer the primary research question.

Limitations

The two primary limitations of the research are the availability of time in which to conduct this research and the classification restriction placed on this research. In an examination of the documents, this research might be enhanced further by the conduct of additional interviews specifically designed to answer the first two secondary research questions. The primary resource documents of semi-professional articles and operational experience interviews have contributed a significant amount of data to the research. However, since these documents are not specifically created to support this research, the previously mentioned coding technique is used to analyze and make meaning and of the collected data. To conduct of multiple interviews would require the additional time to identify and verify the correct population. Multiple interviews would also require further review boards and approval for the research. Quite simply, the time available to conduct an interview-centric research was not available.

The secondary limitation is the restriction of the classification level of the research. While many excellent articles and relevant information are available online via the secure websites curated by the Center for Army Lessons Learned and the Joint Lessons Learned Information System, many of these documents are classified at the For Official Use Only level. The research conducted in this study is meant to be available to a wide audience. Because of this, the research is at the unclassified level.

Delimitations

The first delimitation of the research is that it will not examine sister services, specifically the Marines Corps, or other nation states land component signal forces to compare the conduct of signal support to operation at the tactical level. An equally fascinating comparative case study would be the examination and collection of data from other land component services. However, this research is specific to Army Brigade and Division, and therefore, Army focused.

The second delimitation of the research is that it will not examine the role of leader development of cyber operations within the tactical force. Both offensive and defensive cyber operations are critical to the success of operations at both the strategic and tactical level. As cyber has gained traction as an everyday word, the signal branch and cyber branch can fuse together. It is true that the Signal Corps does operate extensively within the cyber domain. It is also true that the signal branch and cyber branch have mutually supported and complimentary mission sets. However, the missions performed by these two branches remain distinct and different. Research of how leader development is done efficiently within the cyber branch should be as a separate research topic. Any attempt to encompass such a new and complex system within this research would simply not the Cyber Corps justice.

The third and final delimitation is that research focuses on the leadership development of specifically signal officers. The research does not discuss or begin to address how the implementation of the modular force structure has affected the leader development our non-commissioned officer corps. Scoping the research in this manner focuses the research on meeting the primary limitation of time allotted to conduct and

complete the research. This particular component is one of three recommendations for future study at the conclusion of this research.

Summary

In summary, the purpose of this qualitative research case study is to understand the role signal senior leaders and their staff have in the leader development of emerging leaders who support the tactical force. The research does this by conducting scholarly qualitative research using the comparative case study methodology. The research examines the problem of how Army's modularity force structure has compromised the leader development of the company grade signal officers. The gap in the current literature is the lack of scholarly examination of how the inactivation of the Division Signal Battalions in support of the modularity force structure has impacted the leader development of signal officers.

The primary research question is: "How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers for tactical organizations?" The secondary research questions construct the framework for the comparative case study research. The case studies focus on signal leader development in a pre-modular signal force, a modular signal force, and pilot Division Signal Battalion. The theoretical framework of Leads, Develops, and Achieves from the Army's Leadership Requirement's Model serves as a familiar guidepost for our analysis and understanding of the source data.[39] This guidepost shapes the research analysis as the data from source documents is collected and coded. This coding leads to the

[39] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-4.

understanding and nature of the core topic of leader development and how leader development ties all the secondary research questions together to answer the primary research question effectively.

The research has the two limitations of available time in which to conduct this research and the classification restriction to allow dissemination to a greater audience. Finally, the research has three delimitations. The first is the conduct of leader development and signal support to operations will not be researched outside of the bounded Army system. The second delimitation of the research is that it will not examine the role of leader development of cyber operations within the tactical force. The is because the core missions of the Signal Corps and Cyber Corps remains distinct. The research does not recommend that the force structures examined are the right fit for the cyber branch even though the mission sets are mutually supportive and complementary. The final delimitation is that the research has been scoped to only focus on the signal officer leader development to meet the primary limitation of time to conduct and complete the research.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of conducting a literature review is, "to provide the foundation for contributing to the knowledge base."[40] This literature review accomplishes this by the review and analyzation of four areas most pertinent to the research and organizes these areas into analytical essays. These four areas are signal support to operation before modularity, a review of modularity, an examination of command relationship between signal officers within a BCT, and a review of the Army's Leadership Development Program and its areas of effectiveness.

The first essay focuses on providing the historical context of the conduct of signal support operations before modularity. The purpose of this essay is to provide the historical context signal operations from World War II until directly before the implementation of modularity. Through this essay, the reader will see that the Signal Corps formations that supported the Division and below units has been consistently evolving. This essay also informs the roles and responsibilities within the Division Signal Battalion with a focus on the Division Signal Battalion Commander.

The second essay examines how the Army's modular force structure came into existence. This purpose of this essay is to understand the logic, events, and reasons that led to the creation of the BCTs. This essay concludes with a discussion of how where the

[40] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation,* 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 72.

Brigade's Signal Company is a hierarchical structure to provide a foundation for understanding the following essay.

The third essay will review the command relationships within the BCT. Specifically, between the Brigade S6 and the Brigade Signal Company Commander. This essay uses current doctrine to define and examine these relationships. With an understanding of doctrine, observations from CTC observer and controllers will discuss the how these relationships function within an observed operational setting.

The final essay is a review of the Army' Leadership Development program. This essay first establishes a baseline of the Army's leadership doctrine. It is within this doctrine that the theoretical framework of Leads, Develops, and Achieves is derived. After discussion of the doctrine, the essay reviews the results of a 2008 RAND study. This study first discusses the type of leadership experiences as rated by junior Captains, senior Captains, and junior Majors which have the greatest impact on their development. This essay concludes by reviewing which officer within the formation would appear to have the single greatest impact on the leader development of junior officers.

In summary, this introductory essay has previewed the organization and content of the literature review to assist the reader in understanding this chapter. This essay also strives to provide a clear intent of the purpose a literature review. Finally, it important to remember a review of this particular literature is essential to the research. It is essential because it will inform the analysis and will be referenced routinely throughout the research.

Signal Support Operations Prior to Modularity

Three types of general signal organizations provided signal support to operations in World War II, "a Signal Company for a Division, a Signal Battalion for Corps or a field army" [41] and cellular teams that provided augmented support.[42] The force structure of Signal Battalion supporting a Corps or field consisted of:

> A headquarters signal service company, a signal operations battalion furnishing communication at the army command posts, one or more construction battalions, making telephone cable and wire installations down to corps level and back to army rear, one or more signal radio intelligence companies, a pigeon company, and a signal photographic company.[43]

Sometimes the Corps Signal Battalion or Division Signal Company were unable to meet all the mission's communication requirements. In this instance, augmented communications support came in the form of cellular signal teams. The term cellular at this time meant, "taking parts of existing tables [of equipment] and fitting them together in new combinations."[44] This support focused on the creation of a "pool of trained detachments for transfer to foreign service as required" [45] These modularity signal support forces provided communications for "task forces, reinforced [sic] Divisions, and

[41] George Raynor Thompson and Dixie R. Harris, *The Signal Corps: The Outcome* (Washington, DC: U.S. Government Printing Office, 1966), 24, accessed January 26, 2017, http://www.history.army.mil/html/books/010/10-18/CMH_Pub_10-18.pdf.

[42] Ibid., 22-23.

[43] Ibid., 21.

[44] Ibid., 24.

[45] Ibid., 23.

other unorthodox units [which] fought the early engagements of World War II."[46] These cellular signal teams were extremely scalable as it allowed the specific "groupings of Signal Corps men, equipment, and communications installations tailored to fit the situation."[47]

In its initial conception, the cellular structure included 54 different types of teams.[48] "Teams bore 2-letter designations, which indicated roughly their size and mission. For example, EF meant a 16 man radio link team"[49] The ability to build the bespoke communication packages to support combat units was so popular that by the end of the war there were 116variations of these teams.[50] Other branches also bought into this type of tailorable modular support. The quartermaster branch, "had 86 [teams] . . . ; the Transportation Corps had 74; the Corps of Engineers 72 [teams]."[51]

In 1959, "Divisional signal companies were expanded into Battalions to support the Army's reorganization into Pentomic Divisions.[52] The name pentomic stemmed from,

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[46] Ibid., 22.

[47] Ibid., 22-23.

[48] Ibid., 25.

[49] Ibid.

[50] Ibid., 26.

[51] Ibid.

[52] Rebecca Robbins Raines, *Getting the Message Through: A Branch History Of The U.S. Army Signal Corps* (Washington, DC: U.S. Government Printing Office, 1996), 342, accessed January 22, 2017, http://www.history.army.mil/html/books/030/30-17-1/CMH_Pub_30-17-1.pdf.

"the basic organization in fives and its adaption for the atomic age."[53] The Pentomic Divisions were smaller than the traditional Division and were reduced in size from about 17,000 to less than 12,000.[54] However, the Signal Battalion would now support communications of, "five battle groups that could operate independently or concentrate for a major [nuclear or conventional] attack.[55] The independent operations of Division assets across a wide area of operations meant that a centralized Signal Company could no longer effectively perform its duties. The Division Signal Battalions were established to meet the increased requirement. With the creation of the Division Signal Battalions, the Division signal officer became dual-hatted as both Battalion Commander and Division signal officer.[56]

The 1977 Field Manual 11-50 describes the Battalion Commander's role as, "responsible for commanding, directing, and supervising the Division Signal Battalion's efforts and activities in such a manner as to accomplish the Battalion mission."[57] Regarding the duties of his staff officer position the Division signal officer's responsibilities were "categorized as advisory, coordination, plans and orders, staff

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[53] David F Melcher, "How to Build the Wrong Army." *Military Review* 73, no. 9 (September 1992), 70, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p124201coll1/id/480.

[54] Ibid., 70.

[55] John Schleifer, "Army Transformation Assessing the Implications on Signal Organizations" (master's thesis, U.S. Army War College, 2005), 10, accessed April 20, 2017, http://www.dtic.mil/get-tr-doc/pdf?AD=ADA432778.

[56] Ibid.

[57] Department of the Army, Field Manual 11-50, *Combat Communications Within the Division* (Washington, DC: Government Printing Office, 1977), F-1.

supervision, liaison, and training."[58] The two responsibilities that have carried through to the present day, and still doctrinally the responsibility of the Division G-6 are the responsibility of training and the assignment of signal personnel.[59] The Division signal officer was responsible for ensuring the training, "to all assigned signal and communications units of the Division.[60]

The Lieutenant Colonel assigned to this position did have some significant help from his staff to ensure he was able to perform both roles. On the Division staff side, there was the Assistant Division Signal Officer. Within his Battalion, the Battalion Commander also had both a Battalion executive officer the Battalion S3. The Assistant Division Signal Officer was responsible for, "the communications systems planning element" which "coordinates the communications support requirements of all units in the Division area."[61] The Battalion S3 functioned as "communications systems control element" which, "are responsible for the design, modification, and management of the Division communications systems which is installed and operated by the Signal Battalion." [62] This role would later evolve into the term known as SYSCON or system control with the introduction of mobile subscriber equipment (MSE) and had the

[58] Ibid.

[59] Ibid.

[60] Ibid., F-4.

[61] Ibid., 7-25.

[62] Ibid.

doctrinally defined role to "monitors, manages, and configures the MSE network (voice and data) for optimum communications."[63]

The Division Signal Battalion of 1977 also had three subordinate Companies. A Headquarters Company, a Command Operations Company, a Forward Communications Company, and a Signal Support Operations Company.[64] The Command Operations Company's responsibility was to establish "signal centers at [Division] main and at Division artillery."[65] The Forward Communications Company was responsible for ensuring communications to each of Division's Brigades by establishing "three signal centers in the Division forward area, in the vicinity of each Brigade trains area."[66] The Signal Support Command Center provided a signal center to "the Division support command (DISCOM)" as well as "the Division's rear elements." [67] In other words, each company within the Division Signal Battalion has a force structure that aligned it to the type of unit supported. Since these Signal Companies were tailored to support a specific type of unit, the habitual relationship would form. The development of this relationship led to an understanding of the unit's standard operating procedures that allowed the integration of the Signal Companies into the supported unit.

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[63] Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Government Printing Office, 1999), 1-7.

[64] Department of the Army, Field Manual 11-50, *Combat Communications Within the Division* (Washington, DC: Government Printing Office, 1977), G-5.

[65] Ibid., 7-21.

[66] Ibid.

[67] Ibid.

With the introduction of MSE, the Platoons within the Forward Communications Company increased in size to each become their own Signal Companies.[68] The area signal companies established high-speed data connectivity via the line of sight system within the MSE network.

The increased capability brought on by the MSE network eventually led to the success of the Force XXI Division Army Warfighting Experiment (DAWE) in November 1997.[69] This experiment demonstrated the digital Division's capability to command and control a much greater area than had previously been doctrinally believed. The experiment resulted in the 4th Infantry Division and 1st Cavalry Division being converted into digital Divisions in 1999 and 2002 respectively.[70] These digital Divisions were authorized both a Division G6 and a Division Signal Battalion Commander.[71] "The other eight Divisions remain unchanged with the Division Signal Battalion Commander dual-hatted as the G6."[72]

The identification of communications requirements began during the predeployment phase of operations. Identification of requirements ensured the successful planning and deployment the signal teams. This phase would first, "identify their . . .

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[68] Department of the Army, Field Manual 11-43, *The Signal Leader's Guide* (Washington, DC: Government Printing Office, June 1995), 2-8.

[69] John Schleifer, "Army Transformation Assessing the Implications on Signal Organizations" (master's thesis, U.S. Army War College, 2005), 10, accessed April 20, 2017, http://www.dtic.mil/get-tr-doc/pdf?AD=ADA432778.

[70] Ibid.

[71] Ibid.

[72] Ibid.

communications support requirements"[73] Next, "the G6 planners, based on command guidance. .determine which headquarters will receive support."[74] These two variables determine, "the method or type of signal support used to satisfy command, control, and communications requirements."[75] After this, "the SYSCON [system control] establishes and publishes communications priorities in the OPORD [operations order] or unit SOP [standard operating procedure]."[76] A detailed planning logic map of the predeployment planning process to supporting tactical operation process is presented below in Figure 1.

To provide signal support to operations to the units requesting that support is important to note the degree of deliberate planning in this process. Plans on how to support the maneuver requirements would pass through several layers of analysis and planning before creation and approval of the communication support plan. The key to this process was that the signal teams themselves had to a provide a packet back to the operations officer as a type of brief back on how the support would occur. Understandably, not all planning can be conducted this deliberately. The process below is the doctrinally descriptive way in to conduct communications planning directly before the implementation of modularity.

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[73] Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Government Printing Office, 1999), 4-5.

[74] Ibid.

[75] Ibid.

[76] Ibid.

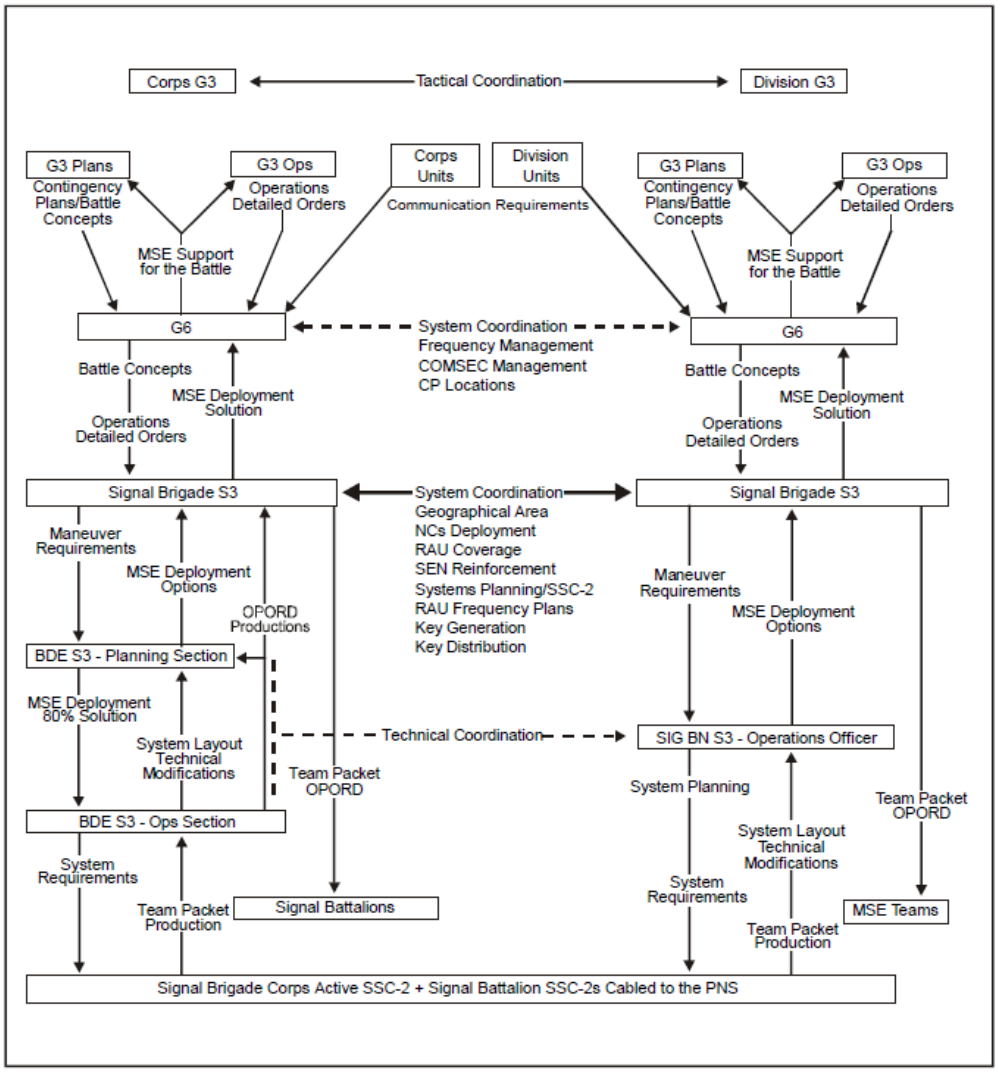

Figure 1. MSE Predeployment Planning Flow in a Corps Scenario

Source: Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Government Printing Office, 1999), 4-4.

A Review of Modularity

The idea for a modular brigade force started to form after the collapse of the Soviet Union.[77] After the collapse, leaders realized the developed European theater, characterized by its robust host nation support, no longer aptly defined the environment the U.S. Army would operate within.[78] With no evident near peer force, the environment the Army would operate within was an uncertain one.

The initial framework for modularity was laid out within the Army's Training and Doctrine Command (TRADOC) Pamphlet 525-5, *Force XX1 Operations*, in August of 1994.[79] The pamphlet defined modularity as, "a force design methodology that establishes a means to provide interchangeable, expandable, and tailorable force elements."[80] The pamphlet further assigned five characteristics to this force as, "doctrinal flexibility, strategic mobility, tailorability [sic] and modularity, joint and multi-national connectivity, and versatility to function in war and operations other than war."[81]

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[77] Todd A Schmidt, *Evolve or Die: The U.S. Army's Darwinian Challenge* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2013), 12, accessed April 25, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll3/id/3045.

[78] Stuart E. Johnson et al., *A Review of The Army's Modular Force Structure* (Santa Monica, CA: RAND Corporation, 2011), 12, accessed January 20, 2017, http://www.rand.org/pubs/technical_reports/TR927-2.html.

[79] Ibid., 7.

[80] U.S. Army Training and Doctrine Command, TRADOC Pamphlet 525-5, *Force XXI Operations* (Fort Monroe, VA: Government Printing Office, 1994), Glossary 5.

[81] Ibid., para. 3-1.

Before modularity, the deployment of units was a Division-centric model. Units were either added or removed from the Division headquarters based upon the capabilities required to support the mission. This process was known as task organization. A doctrinal definition from the period defined task organization as, "a temporary grouping of forces designed to accomplish a particular mission."[82] This system of task organization for missions had the observed weakness of that it, "did not optimize capabilities"[83] and in fact, "often involved deploying only pieces of an organization (typically a Division), rendering the remaining portion unbalanced and incapable of performing its mission."[84]

A Brigade Combat Team (BCT) would be created to address the concerns created by the task organization flaw, maximize unit cohesion, and meet the five characteristics of a modular force. The BCT would be combat arms and maneuver centric and would include the required combat support and combat sustainment support formations within the Brigade. The belief was this alignment would create a, "relationship of mutual confidence and loyalty within Companies, Battalions, and Brigades, which would, in turn, make units more effective in combat."[85]

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[82] Department of the Army and U.S. Marine Corps, Field Manual 101-5-1 and Marine Corps Reference Publication 5-2A, *Operations Terms and Symbols* (Washington, DC: Government Printing Office, September 21, 2004), 196.

[83] Stuart E. Johnson et al., *A Review of The Army's Modular Force Structure* (Santa Monica, CA: RAND Corporation, 2011), 9, accessed January 20, 2017, http://www.rand.org/pubs/technical_reports/TR927-2.html.

[84] Ibid.

[85] Ibid., 12.

Another factor that drove the formation towards modularity of was General Schoomaker's belief that, "Divisions were no longer the optimal unit of action."[86] His key reason for this shift was the belief that "no single, large fixed formation can support the diverse requirements of full spectrum operations."[87] In other words, General Schoomaker assessed that the Divisions were simply the wrong sized organization. They were too large and not tailorable enough to meet the five characteristics described in the TRADOC's pamphlet. Units needed the internal ability to be adaptive as the mission and situation developed.

Simultaneously, Schoomaker believed that modularity would also create a more efficient force because the Brigade structure would now be standardized. Schoomaker highlighted this problem during a congressional testimony by stating, "right now, all these Brigades are different—the number of helicopters in them, the number of units, sub-units within these Brigades—and it's extraordinary [sic] inefficient."[88] The standardization of Brigades would lead to great efficiencies across the force as a standardized unit would be interchangeable with the unit it was replacing.

The continuing emphasis on the development technological solutions to enable Commanders to conduct mission command on the battlefield also served as driving factor toward the creation of modular units. Within Field Manual 3-0 the manual cites that modularity was needed because of the "shift in capability with the introduction . . . of

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[86] Ibid., 11.

[87] Ibid.

[88] Ibid.

satellite-based communications . . . systems for command and control"[89] This shift in capability highlighted by 1997's Force XXI Division Army Warfighting Experiment (DAWE).

During this experiment, it was proven that, "improvement in information superiority . . . allow[ed] the digital Division to operate over a 120 x 200-kilometer area, compared with a 100 x 100-kilometer area."[90] With Divisions now enabled to operate in an area almost two and a half square kilometers larger, a digital Brigade would also be expected to conduct operations within a larger area of operations. The rapid pace of development and availability of commercial of the shelf communications technology complimented the Army's desire to remotely be able to conduct mission command. The availability high-speed data linkages also complimented these products and helped to create a digital common operating picture. This common operating picture allows Commanders to conduct mission command operations from anywhere in the world effectively.

Field Manual 3-0 states another driving force towards modularity was the belief that future conflicts would involve "tactical operations [which] continue to evolve into distributed, non-contiguous forms."[91] The requirement links almost directly from General

[89] Department of the Army, Field Manual 3-0, *Operations* (Washington, DC: Government Printing Office, December 2008), C-1.

[90] John Schleifer, "Army Transformation Assessing the Implications on Signal Organizations" (master's thesis, U.S. Army War College, 2005), 10, accessed April 20, 2017, http://www.dtic.mil/get-tr-doc/pdf?AD=ADA432778.

[91] Department of the Army, Field Manual 3-0, *Operations* (Washington, DC: Government Printing Office, December 2008), C-1.

Shinseki's 1999 testimony before the Senate Armed Services Committee in which he stated the Army needed to be "more deployable, more agile, more versatile, more lethal, more survivable, and more sustainable."[92] These views reflected the belief that complex operations would define the nature of the conflict in a post-Cold War world. The force structure needed the ability to match the requirements for these ever more complex engagements that were part of the then U.S geopolitical strategy. This belief was proven as the U.S. became involved in the complex situations as part campaigns in both Iraq and Afghanistan.

The modularity force structure was formally enacted on September 5, 2003, as General Schoomaker became the Chief of Staff of the Army. General Schoomaker's initial guidance was, "the proposed force structure should be as capable as current units, be more deployable, and create more combat force structure than the Division-centric force of the day."[93] 30 days after the issuance of this guidance, designs based on the pilot program began. By February 2004, the Chief of Staff of the Army was approving designs for modular 3 and 2 star headquarters. These units would now be designated as, "a unit of employment 'X' [UE_x] (Corps/Division), and a unit of employment 'Y' [UE_y] (Army

[92] Stuart E. Johnson et al., *A Review of The Army's Modular Force Structure* (Santa Monica, CA: RAND Corporation, 2011), 9, accessed January 20, 2017, http://www.rand.org/pubs/technical_reports/TR927-2.html.

[93] Ibid., 49.

Service Component Command/Corps)."[94] The combined arms maneuver BCTs were now the "unit of action (UA)."[95]

The BCTs force structure now had, "units organic to the BCT that formerly had been owned by the Division. These units, most notably a RSTA [reconnaissance, surveillance, and target acquisition] Squadron, Artillery Battalion, Brigade Special Troops Battalion, and a Brigade support Battalion."[96] "The Brigade Special Troops Battalion provide[d] command-and-control capabilities, a fire support element, an MP Platoon, a Signal Company and a Military Intelligence Company."[97] Because the Special Troops Battalion had a varying array of companies, the Battalion Commander position, the Battalion executive officer, and the Battalions S3 were all coded as O1A positions, or branch immaterial.[98] This O1A coding facilitated the potential that training, readiness, and oversight of the subordinate companies would be from leaders from within their branch.

In 2014, the Special Troops Battalions began their conversion to Brigade Engineer Battalions to enhance, "engineer mission support by providing the required

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[94] Ibid.

[95] Ibid.

[96] Ibid., 21.

[97] Ibid., 32.

[98] Department of the Army, "Mission Table of Equipment, Special Troops Battalion, 3rd BCT, 3rd Infantry Division," Force Management System, 2013, accessed April 16, 2016, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=87305RFC31&CCNUM=0213&DOCST=H&UIC=WJJLAA&EDATE=5/16/2013.

engineer mission command and staff, as well as organizational capability, within all BCT organizations."[99] With two to three companies now engineer companies the Battalion Commander position, as well as the S3, now became 12A positions.[100] The meant that only engineer officer could now fill these positions. The only the Battalion executive officer remained coded as O1A position.

Signal Command Relationships within the Brigade Combat Team

This essay will discuss the command relationships between the Brigade S-6 section, the Brigade Engineer Battalion (BEB), and the Brigade Signal Company. The essay will first review the command relationship between the Brigade S-6 and the Brigade Signal Company and then discuss the command relationship between the BEB and the Brigade Signal Company. The essay will conclude with a review of the doctrinal approach the Brigade S-6 is prescribed to use to coordinate with the Brigade Signal Company.

The army as an organization is established as a hierarchical structure. A hierarchical structure naturally emphasizes the use formal command relationships such as

[99] Center for Army Lessons Learned, *The Brigade Engineer Battalion: A Leader's Guide* (Fort Leavenworth, KS: Government Printing Office, 2015), iii, accessed April 16, 2017, http://usacac.army.mil/sites/default/files/publications/15-12_0.pdf.

[100] Department of the Army, "Mission Table of Equipment, 23rd Engineer Battalion," Force Management System, 2016, accessed April 16, 2017, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=05315KFC25&CCNUM=0118&DOCST=A&UIC=WAZ7AA&EDATE=1/16/2018.

Operational Control, Tactical Control, and Administrative Control.[101] Both Army and Joint doctrine defined these relationships. The force structure of the Brigade Combat Team creates confusion in the command relationship between the Brigade Signal Company and the Brigade S-6 section. Because of this force structure, the Signal Company Commander often asks, "Who do I work for?" Observers and controllers from the Army's Combat Training Centers (CTC) have repeatedly witnessed this issue that when the Brigade S6 arrives for a rotation, a common belief is that "the [Brigade] Signal Company and its assets belong to them."[102]

At first glance, current Army doctrine is also ambiguous in regards the relationship between Brigade Signal Company and the Brigade S6. The relationship in the Brigade Engineer Battalion Army Training Publication states only that, "the Company typically conducts collaborative planning for mission specifics with the BCT S-6."[103] The comparable signal doctrine states, "the S-6 consults and informs the higher headquarters J-6/G-6, the Brigade Signal Company Commander . . . to ensure efficient communications employment throughout the Brigade area of operations."[104] Because of

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[101] U.S. Joint Chiefs of Staff, Joint Publication 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: U.S. Joint Chiefs of Staff, March 25, 2013), V-2.

[102] Brian Laney, "Defining the BCT Signal Team Command Support Relationship," *Army Communicator* 40, no. 4 (Winter 2015), 16, accessed January 11, 2017, http://www.signal.army.mil/ArmyCommunicator/2015/Vol40/No4/Winter_2015_Online.pdf.

[103] Department of the Army, Army Training Publication 3-34.22, *Engineer Operations-Brigade Combat Team and Below* (Washington, DC: Government Printing Office, December 2014), 21.

[104] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-2.

this ambiguity 3rd Brigade, 82nd Airborne Division tasked organized the Brigade S6 section, "directly under the NSC [Brigade Signal Company]" during a 2011 CTC rotation.[105] This arrangement allowed for the creation of a formal command network that facilitated the collaborative planning effort between both the Brigade S6 and the Signal Company Commander.

The author of this article believed that "this task organization worked extremely well for this unit and should be considered as a basic task organization set for other BCTs' signal support architecture."[106] It is true that this temporary task organization did create the required collaborative planning between the Brigade S-6 and the Brigade Signal Company Commander. However, as a long-term solution, reorganizing a Brigade staff section underneath a Company in a subordinate Battalion is not a viable solution. If enacted, there would include a constant discussion of who commanded the unit. Additionally, if tasked organized in this way, who does the Brigade S-6 work? Quite simply this is not an option

Planning is a central requirement for conducting a successful mission. Another noted trend from a CTC Observer controller was that the BEB, "does not understand the mission requirements or capabilities of the BDE Signal CO [sic] resulting in BEB staff

[105] Kelli J. Kulhanek, "Task Organizing the Brigade S6 and the Network Signal Company as a Team," Joint Lessons Learned Information System, 2011, accessed November 14, 2016, https://www.jllis.mil/?doit=view&disp=cdrview&cdrid=4024.

[106] Ibid., 1.

failure to plan for BDE Signal CO [sic] requirements."[107] The following observation is from an observer controller describing the military decision making that highlights this lack of planning:

> Running estimates for BEB staffs show their attention to engineer tasks. The BEB S2 does not know where [Signal Company] RETRANS [retransmission] teams are located or where they are going [to] provide intelligence updates and receive debriefs as they over watch named areas of interest (NAIs) [named areas of interest] from RETRANS sites. The [BEB] S3 does not track RETRANS team locations and dispositions on the battlefield, emplace no fire areas (NFA) over the RETRANS sites, put them on BCT graphics . . . ensure they are not sitting in safety danger zones, or have CCIR [commanders critical information requirements] for the [Brigade] Signal [Company]. BEBs do not have CCIR [or] FFIR [friendly force information requirements] for the [Brigade] Signal [Company] and as a result the Battalion does not understand what is going on [to] help its leaders adapt to the situation on the ground.[108]

This above statement is from a submitted but as of yet, unpublished article by a signal officer who served as an observer controller at the National Training Center. The important point is that this statement is not as a single observation from one BEB, but rather a trend from multiple BEBs who rotated through National Training Center during her time there. The above statement represents a lack of the application of mission command in regards to both the philosophy and warfighting function to the Brigade Signal Company.

The definition of mission command as a warfighting function is, "the related tasks and systems that develop and integrate those activities enabling a Commander to balance the art of command and the science of control to integrate the other warfighting

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[107] Mariah McCallum, "Who Secures, Sustains, and Emplaces the Brigade Signal Company," (Unpublished Article Submitted to the Center for Army Lessons Learned, Fort Leavenworth, KS, 2016), 1.

[108] Ibid., 2.

functions."[109] Nothing within the previous statement speaks to the integration of the Signal Company. If not successfully integrated into operations, how will the Signal Company Commander be expected to be successfully developed as a leader? The definition of mission command as a philosophy is, "mission orders to enable disciplined initiative within the Commander's intent to empower agile and adaptive leaders in the conduct of unified land operations"[110] What is the Commander's intent for the Brigade Signal Company? How can the Signal Company Commander display disciplined initiative if his Battalion's operations officer is not concerned about his soldiers' locations? An example may be if the battle were to evolve and the signal companies retransmission teams were out of position. Could the Signal Company Commander understand the intent of the Battalion and Brigade main effort to know where best to relocate his team?

Now that this essay has examined some operational concerns with this command structure, the research will now discuss the doctrinally correct method of mission command for the Brigade Signal Company. The doctrinally correct method requires that to task or order the Brigade's signal force "execution orders are developed and issued through the normal command channels [and] . . . the authority over the Signal Company's assets is employed using [telecommunications service orders] TSOs" by the Brigade

[109] Department of the Army, Field Manual No 6-0, *Commander and Staff Organization and Operations* (Washington, D.C: Government Printing Office, 2016), vii.

[110] Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, May 2014), 1.

S6.[111] The important distinction of a TSO is that it does not allow the movement of signal platforms to within a Brigade area of operations. A TSO only allows the network planners to "adjust and modify the existing network plan to meet unexpected circumstances."[112] The coordination for the relocation of signal assets must be through the respective Brigade and Battalion operations officers via a fragmentary or operations order."[113]

In summary, this essay has reviewed how the force structure of the BCT has created a dilemma for the Brigade Signal Company Commander. While the Brigade S-6 section may want to have full operational control over the Signal Company, they do not have the required capabilities to ensure the Signal Company is properly cared for as a forward deployed staff section. We have also discussed that the BEB who does have these capabilities is observed to have difficulties in conducting mission command as both a philosophy and a warfighting function and struggles with integrating the Brigade Signal Company into operations. Finally, the essay concluded by a doctrinal review of the use of the operations process and TSOs enable the flow of information and formally task the Signal Company. This formal flow of information is the critical link between the Brigade S-6 and Brigade Signal Company.

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[111] Department of the Army, Field Manual 6-02.43, *Signal Soldier's Guide* (Washington, DC: Government Printing Office, 2008), 1-8.

[112] Ibid., 49.

[113] Ibid.

The Army's Leadership Development Program

An overview of the Army's Leadership program is essential in establishing the required framework for the research. This overview also provides an understanding of the four domains in which development of leaders occur, and the amount of influence that senior Army leaders have in the development of subordinates.

The Army's doctrinal manual on leadership uses the, "Army Leader Requirements Model (ALRM)" as a guiding framework for the characteristics that all service members regardless of ranks should possess.[114] Two categories divide the ALRM. The first category is attributes which, "describe the leaders that the Army wants . . . how an individual behaves and learns within an environment."[115] The three required attributes according to the ALRM are character, presence, and intellect.[116] These attributes, "enable the leader to master the core leader competencies."[117]

The second portion of the ALRM is competencies. The three competencies are leads, develops, and achieves. Within each competency, there are additional categories to help frame each category. For example, within the Leads competency, there are five additional subcategories that aid in an either an observer or leader's assessment. These five subcategories are: "the competency to lead others, build trust, extend influence

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[114] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-4.

[115] Ibid.

[116] Ibid.

[117] Ibid.

beyond the chain of command, leads by example, and communicates."[118] Under the development competency, the four subcategories are: "creates a positive environment, prepares self, develops others, and steward the profession."[119] Under the achieves competency there is only one subcategory, "gets results."[120]

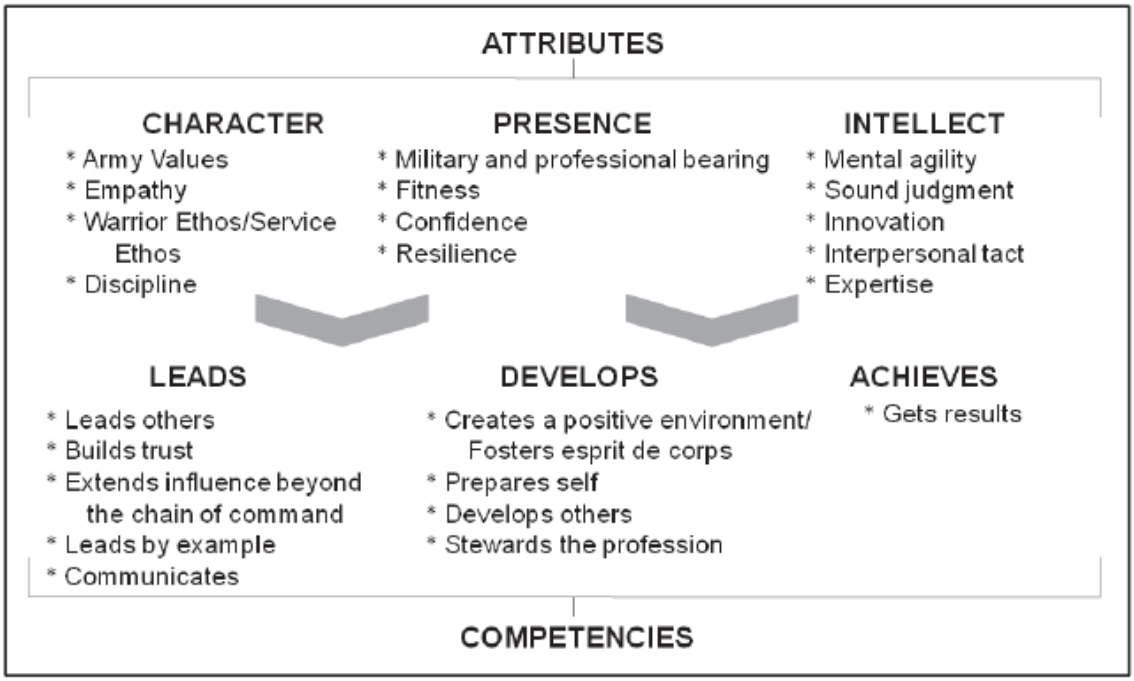

Figure 2. The Army Leader Requirements Model (ALRM)

Source: Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-5.

[118] Ibid.

[119] Ibid.

[120] Ibid.

Individuals within the Army are encouraged to become lifelong learners. The Army identifies four domains that directly contribute the goal of perpetual development of, "the institutional schooling, self-development, realistic training, and professional experience"[121] Within these four domains a leader will take their initial attributes and competencies and continually learn and refine them throughout their career.

A 2008 study by the RAND Corporation conducted a survey of junior Captains, senior Captains, and junior Majors to see just which of these domains, "most strongly encourage leadership development."[122] The survey compiled the junior Captain's responses and were placed the results in one group and the responses of senior Captains and junior Majors in another group. The survey gave the participants a total of 12 possible responses, and they were asked to rank their top three. In both the groups, the most effective experience in leadership development occurred within the realistic training domain. Specifically, "experience of leading a unit during operations or tactical training exercises."[123]

The number two and three responses occurred within the professional experience domain were, "example of leader(s) in the chain of command" and "mentoring from a leader in your chain of command."[124] The junior Captains' responses ranking last in the

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[121] Ibid.

[122] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), xviii, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[123] Ibid., 25-26.

[124] Ibid.

survey were, “classroom lectures or seminars on leadership topics, staff rides to sites off base, and participation in online forums.”[125] The senior Captains’ and junior Majors last ranking responses were, “developing and following a self-development plan, classroom lectures or seminars on leadership, and participation in online forums.”[126] While the order of the bottom three changed, the research indicates that the least effective methods of leader development reside within the institutional and self-development domain.

The study emphasizes the role that Battalion Commander’s have in the leader development of junior officers stating that, “the Battalion Commander is the most important individual affecting leader development programs for junior officers.”[127] The question on the survey was, “to describe the leadership qualities of a specific person in the Army who sets an example that they would like to follow.” [128] The question had a range of multiple leaders attributes that a respondent could choose from. The secondary question to this answer was to, “indicate the position of the person they had described.”[129] By a large difference in the most populated responses, 43 percent of the senior Captains and junior Majors identified the position as their Battalion or Squadron

[125] Ibid.

[126] Ibid.

[127] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[128] Ibid., 33.

[129] Ibid.

Commander.[130] Junior Captains, on the other hand, identified their Company Commander the most (35 percent) with their Battalion or Squadron Commander a second at 26 percent.[131] Brigade Commanders as a comparison were identified only as the leader they most like to emulate by, "16 percent of Majors and senior Captains and only 1 percent of junior Captains."[132]

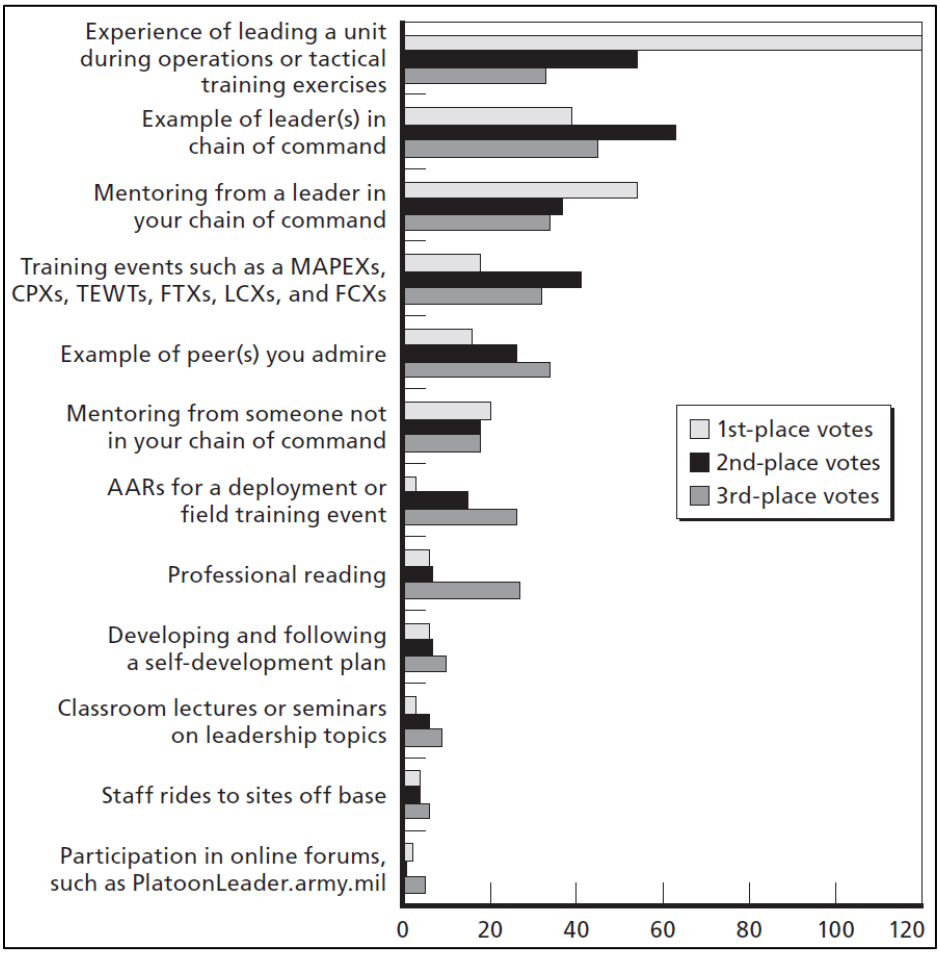

Figure 3. Junior Captains' Ranking of Effectiveness of Leader Development Activities

[130] Ibid.

[131] Ibid.

[132] Ibid.

Source: Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), xviii, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

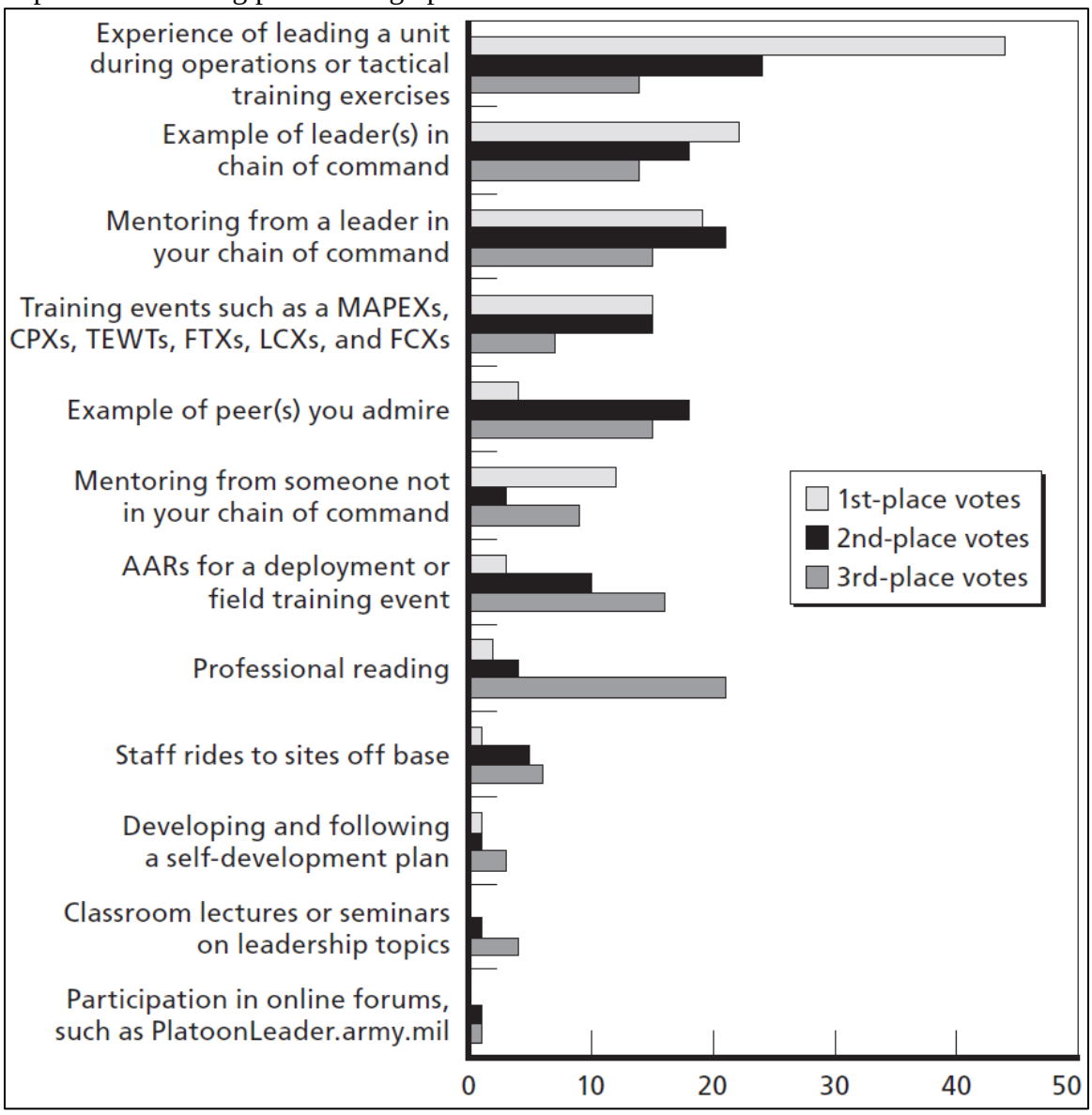

Figure 4. Majors' and Senior Captains' Ranking of Effectiveness of Leader Development Activities

Source: Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), 25, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

Position	Majors/ Senior Captains	Junior Captains
Brigade Commander	16	1
Battalion Commander	43	26
Company Commander	7	35
Staff Officer (Brigade or below)	20	23
NCO	6	9

Figure 5. Percentage of Respondents Whose Most-Admired Person Held Given Position

Source: Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), 89, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

Summary

The intent of the literature review within this chapter began with a discussion to gain an understanding of how signal support evolved from World War II, through the cold war, right to the point when modularity was implemented.

The second essay provided a review of modularity to gain an understanding of larger strategic driving factors that helped drive the creation of the modular force structure. The second essay also provided an understanding of where the Signal Company is within the hierarchical structure of a Brigade Combat Team.

The third essay discussed the formal and informal relationships that exist between the Signal Company Commander and Brigade S6 in a BCT. It emphasized recent observations of the ineffective command relationship between the BEB Battalion Commander and the Brigade Signal Company Commander. The essay concluded with a doctrinal description of how the formal tasking authority and process from the Brigade S6 to the Brigade Signal Company Commander.

The final essay provided a brief overview of the Army's Leader Development Program by discussing the ALRM and as well as the results of a RAND study that stated directly behind their operational experience, the single most contributing factor to their leader development of Captains and junior Majors was the mentorship provided by their Battalion Commander.

CHAPTER 3

RESEARCH METHODOLOGY

Basis for Choosing Qualitative Research

Deciding to use qualitative or quantitative research for the study required an understanding of each particular research methodology before making a decision. The most commonly accepted definition of qualitative research is, "describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world order."[133] In other words, "qualitative researchers are interested in understanding how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences."[134]

John Creswell gives eight reasons why a researcher may choose the qualitative research approach. This research addresses three of the reasons that informed the decision to conduct a qualitative research study. The first reason is, "the nature of the research question . . . often starts with a how or a what."[135] As the reader will see later on in this chapter, all three research questions meet this initial criterion. The second reason a

[133] John Van Maanen, "Reclaiming Qualitative Methods for Organizational Research: A Preface." *Administrative Science Quarterly* 24, no. 4 (1979), 520, accessed May 7, 2017, https://eric.ed.gov/?id=EJ212334.

[134] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation*, 2nd ed. (San Francisco, CA: John Wiley & Sons, 2009), 5.

[135] John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Traditions* (Thousand Oaks, CA: Sage Publications, 1998), 17.

researcher may choose qualitative research is, "because of the topic needs to be explored . . . variables cannot be easily identified, theories are not available . . . and theories need to be developed."[136] As the researcher as stated in Chapter 1, the gap within the current literature is the lack of scholarly examinations of how the inactivation of the Division Signal Battalions has impacted the leader development of company grade signal officers. The final reason is, "the need to present a detailed view of the topic. The wide-angle lens or the distant panoramic shot will not suffice to present answers to the problem, or the close-up view does not exist."[137] The field artillery community discusses this topic to some degree, but there is not a comparable study that exists within the Signal Corps.[138]

Quantitative research is defined as, "explaining phenomena by collecting numerical data that are analysed [sic] using mathematically based methods (in particular statistics)."[139] According to Muijs, "there are four main types of research question that quantitative research is particularly suited to find an answer to."[140] The first question is simply, "when we want a quantitative answer."[141] An example for this study may have

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[136] Ibid.

[137] Ibid.

[138] Sean MacFarland, Michael Shields, and Jeffrey Snow, "The King and I: The Impending Crisis in Field Artillery's Ability to Provide Fire Support to Maneuver Commanders" (Washington, DC: Government Printing Office, 2008), accessed May 7, 2017, http://www.npr.org/documents/2008/may/artillerywhitepaper.pdf.

[139] Daniel Muijs, *Doing Quantitative Research in Education with SPSS*. (Thousand Oaks, CA: Sage Publications, 2004), 1.

[140] Ibid., 7.

[141] Ibid.

been examining the number of signal officers serving in Brigade S6 positions who have been relieved and have not received sufficient evaluations to advance to the next rank. While this statistic may highlight a perceived problem, it does not delve deep enough to understand where the problem lies. The type of research question best suited to quantitative study is when "numerical change can likewise only accurately be studied using quantitative methods."[142] As an example is a trend simply increasing or decreasing? Are the numbers going up or going down? The third type of research question is in relation to the explanation of factors, specifically, "many statistical techniques have been developed that allow us to predict scores on one factor or variable."[143] Both of these types of research questions relate the analysis of trends and establishment of linkages. While both these methods could have been appropriate to this research, the development of a large survey would have been required. With the primary limitation of time placed on the research, such a study would not have been realistic. Secondly, the primary source of information was the qualitative review of written material. Specific documents included are: monographs, first person accounts via semi-structured interviews, semi-professional articles, and trends from the U.S. Army's CTCs. The primary source documents and semi-structured interviews are neither naturally statistical in nature nor could they be standardized or focused to specifically collect statistic data. Therefore, a quantitative research mythology would be unable to provide a sufficient analysis give these resources.

[142] Ibid.

[143] Ibid.

After examining both research methodologies, the researcher chose qualitative research to, "work with a few variables and many cases."[144] Instead of the quantitative research to "rely on a few cases and many variables."[145]

Basis for Choosing Case Study Research Tradition

John Creswell discussed five distinct traditions of qualitative research: biography, phenomenology, grounded theory, ethnography, and case study.[146] A biography is primarily focused on, "exploring the life of an individual"[147] Phenomenology is, "understanding the essence of experiences about a phenomenon" with the primary source of data being, "long interviews with up to 10 people."[148] While this particular tradition may have provided insight into the current role leader development has within the Signal Corps, it would not have provided any significant background or baseline from which to move forward with the analysis.

The third qualitative research tradition is grounded theory. The definition of grounded theory is, "developing a theory grounded in data from the field" with the primary data collection source of, "20-30 individuals to 'saturate' categories and detail a

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[144] John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Traditions* (Thousand Oaks, CA: Sage Publications, 1998), 16.

[145] Ibid.

[146] Ibid., 65.

[147] Ibid.

[148] Ibid.

theory."[149] This tradition was not chosen for similar reasons as phenomenology. There would not a comparative baseline of leader development established.

The fourth tradition of qualitative research is ethnography and is, "describing and interpreting a cultural and social group."[150] The data for this type of research consists, "primarily of observations and interviews with additional artifacts during extended time in the field."[151] Given the time resources and requirements, this tradition was simply not feasible.

The final tradition, a case study is, "developing an in-depth analysis of a single case or multiple cases."[152] Alternatively, as Stake describes it, "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident."[153]

Further refining the case study tradition, this research is conducted using the form of a comparative case study. A comparative case study uses multiple case studies, "to investigate a phenomenon."[154] The results from this tradition will analyze the data from multiple sources allowing the direct comparison of the results of leader development within the Signal Corps both before and after modularity occurred.

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[149] Ibid.

[150] Ibid.

[151] Ibid.

[152] Ibid.

[153] R. E. Stake, *The Art of Case Study Research* (Thousand Oaks, CA: Sage Publications, 1995), 18.

[154] Ibid., 48.

The decision to conduct the research by use of a qualitative comparative research case study method is because it, "is an intensive, holistic description and analysis of a single bounded unit."[155] Given the time and resources available the case study will achieve the greatest amount of depth to effectively answer the primary research question of: "How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations?"

Character of the Research

This qualitative research study using case study methodology naturally has several characteristics associated with it. This essay will first discuss the scholarly characteristics associated with the use of case study methodology. Secondly, this essay will review the theoretical framework and discuss why it was chosen. Finally, this essay will define and discuss the boundaries of the particular case studies.

First, the scholarly characteristics of a case study research tradition are that they are particularistic and heuristic.[156] Particularistic is defined as a, "focus on a particular situation, event, program, or phenomenon."[157] The nature of the research is particularistic because it provides scholarly research of how the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations. The term "heuristic means that's case studies illuminate the reader's

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[155] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation*, 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 203.

[156] Ibid., 43.

[157] Ibid., 44.

understanding of the phenomenon under study."[158] The study's use of multiple case studies to examine signal officer leader development meets this heuristic characteristic. The three case studies examine signal officer leader development in the pre-modular force structure, the modular force structure, and finally the Division Signal Battalion pilot force structure. Each of these respective case studies is each designed to answer a secondary research question that will be synthesized to answer the primary research question. In combination with the literature review, the three case studies will offer a deep, "understanding of the phenomenon under study."[159]

Secondly, the research uses the theoretical framework of leader competencies of Leads, Develops, and Achieves from the ALRM to assess the case studies. The Army Doctrine Reference Publication, *Leadership,* provides the clearest logic as to why this particular theoretical framework was chosen:

> Competencies provide a clear and consistent way of conveying expectations for Army leaders. Current and future leaders want to know how to be successful leaders. The core leader competencies apply across all levels of leader positions and throughout careers, providing a good basis for evaluation and focused multisource assessment and feedback. A spectrum of leaders and followers (superiors, subordinates, peers, and mentors) can observe and assess competencies demonstrated through behaviors.[160]

This study primarily is concerned with leader development, so it is appropriate that this theoretical framework is derived from Army leadership doctrine. As the research indirectly observes and assesses the signal officers from the case study, it will analyze

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[158] Ibid.

[159] Ibid.

[160] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-6.

them to see what attributes made them successful. The competencies will also be familiar to most Army leaders since these are the categories they are assessed in during their evaluation reports.

Now that the essay has addressed theoretical framework of the research it needs to address the other characteristics that are determined by the case study methodology. One of the first characteristics of case study methodology is that it is a bounded system. Yin defines boundaries as, "the time period, social groups, organizations, geographic locations, or other conditions that fall within (as opposed to outside of) the case in a case study."[161] Stake defines it even more simply as, "a choice of what is to be studied."[162]

There are several boundaries that apply to these case studies. For the first case study, the three boundaries are the time period, the type of operations conducted, and the type of unit. The time period is the Vietnam War. The system is also bounded in that it specifically discusses how signal support to operations were conducted during the Vietnam War. The research does not discuss tactics or manner in which troops were maneuvered around the battlefield. The final way the system is bounded is that only Division Signal Battalions are discussed. A caveat must be included since the author of the primary data source is Signal Battalion Commander that was not a Division Signal Battalion. Therefore any references made to his battalion must be made with this context in mind. Finally, this case study is not bounded solely by actions that occurred in

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[161] Robert K Yin, *Case Study Research: Design and Methods*, 5th ed. (Thousand Oaks, CA: Sage Publications, 2014), 237.

[162] R. E. Stake, "Qualitative Case Study Analysis," in *The Sage Handbook of Qualitative Research*, ed. Norman Denzin, Yvonna Lincoln, 3rd ed. (Thousand Oaks, CA: Sage Publications, 2005), 443.

Vietnam. We will examine the pre-deployment activities of the Signal Battalion as part of the research.

The second case study of the modular Signal Corps is also the same as the first case study. It is bounded by time, type of operation conducted and type of unit. The time period covered begins in 2003, when modularity was first implemented, to 2015, which is latest source article used in the research. Since the research examines the leader development of signal officers as the primary focus, the case study is also bounded by examining signal support to operations. The final boundary is that only modular units are examined. In particular, BCTs and a Division Special Troops Battalion because the research seeks to understand the impact the modular force structure has had. The Division Special Troops Battalion was created as a byproduct of modularity as the Divisional branch specific units, such as the Signal Battalion, were inactivated as modularity was implemented.

The final case study is bounded to only to the 3rd Infantry Division, Division Signal Battalion (Provisional) program and their experiences. The Division Signal Battalion is the primary force structure unit related to this study. Currently, in the Army, the pilot Division Signal Battalion is the only organization that exists in the Army with this force structure. This case study is also bounded in that the primary data source is the Battalion Commander. This is a conscious decision by the researcher since the RAND study indicated that, “the Battalion Commander is the most important individual affecting

leader development programs for junior officers."[163] Because of this, while additional interviews within the Division Signal Battalion pilot program may have added further context, the limitation time to conduct the research forced the researcher to go directly to the primary source of leader development.

This essay has addressed the three characteristics of this research. The first characteristic dealt with how the research was both particularistic and heuristic and explained how each case study is designed to answer a secondary research question. The second characteristic discussed the theoretical framework and why it was chosen. Finally, the essay discussed specifically how and why the research was bounded to the specific parameters. Now that the research has examined the characteristics of the research, it will discuss the data collection methods used to conduct the research.

Data Collection

A case study has six different recommended types of data collection sources. They are, "documentation, archival records, interviews, direct observations, and physical artifacts."[164] This research will specifically use two of the six types of recommended data collection and through the analysis of documentation and interviews will answer each of the secondary research question before answering the final, primary research question.

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[163] Peter Schirmer et al., *Leader Development in Army Units: Views From The Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[164] Robert K. Yin, *Case Study Research: Design and Methods,* 5th ed. (Thousand Oaks, CA: Sage Publications, 2014), 105.

The review of documents which addresses the secondary research questions focus on the development of leaders before modularity occurred and the impact of leader development after modularity. Sources for the case study will be U.S. Army monographs, operational trends from our CTCs, non-peer reviewed articles published by the CTCs observer and controllers, and evaluation of interviews conducted by the Combat Studies Institutes as part of their Operational Leadership Experiences. Those documents will, "provide other specific details to corroborate information from other sources." [165]

The final source of data collected will be some a semi-structured interview with 3rd Infantry Division Signal Battalion (Provisional) Battalion Commander. "In [a semi-structured] interview, all the questions are flexibly worded."[166] Meaning, that the interview questions are broad and not directed to illicit a particular or specific response. The second reason a semi-structured interview is being conducted is the researcher does not have to stick to only the asking questions on the script. If the person being interviewed provides a response that the researcher feels the need to explore in greater detail, he is free to do so. Merriam states a semi-structured interview, "allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent."[167] In other words, this particular type of interview session allows the research being conducted to happen in a very organic and evolutionary way. Where the researcher listens to each question response, internally analyzes it, and if free to discuss it

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[165] Ibid., 105.

[166] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation,* 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 90.

[167] Ibid.

in greater detail or move onto the next relative point of discussion. In short, this research portion of the research is not static, or not bound solely by the interview questions the researcher originally determined.

The underlying intent for the use of multiple sources "is the development of converging lines of inquiry."[168] These converging lines of inquiry can be triangulated, "to calculate the precise location of an object."[169] To triangulate the analyzed data, the use of the theoretical framework of Leads, Develops and Achieves will be critical.[170] This triangulation will lead the research to ultimately answer the primary research question having explored is from three separate case studies and using three different primary data sources.

Coding

The qualitative research methodology of comparative case study necessitates the use of coding. Coding allows the comparison of the three distinct and different systems found in Signal Corps from pre-modularity, modularity, and Division Signal Battalion pilot program. The coding used will create a common link in which the data can be first be interpreted and secondly, analyzed. It is this data analysis that enables the research to directly compare the leader development from the three case studies to ultimately

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[168] Robert K. Yin, *Case Study Research: Design and Methods,* 5th ed. (Thousand Oaks, CA: Sage Publications, 2014), 120.

[169] Ibid.

[170] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-5.

triangulate and synthesize how modularity has impacted the Signal Corps. Because of the multiple case studies involved in this research a, "cross case synthesis" is required.[171] This "technique treats each individual case study as a separate study . . . aggregating findings across a series of individual studies."[172] In other words, to create this comparative case study, coding will be used to align the primary data sources within the theoretical framework. With the theoretical framework used in a consistent manner throughout the research a more direct comparison of the source data will be made easier.

To effectively analyze the data using this technique a system must be created to compare and contrast the studies directly. This research will be utilizing axial coding.[173] Specifically axial coding, which is sometimes called analytical coding, "is coding that comes from interpretation and reflection on meaning."[174] The Army's Center for Army Leadership is an organization that has significantly studied, reflected, and defined leadership. It is from this organization that source of coding is derived for this research. The primary guiding source for coding during the analysis of this research is from the Leadership Attributes and Competencies Reference Card (LARC).[175]

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[171] Robert K. Yin, *Case Study Research: Design and Methods,* 5th ed. (Thousand Oaks, CA: Sage Publications, 2014), 164.

[172] Ibid.

[173] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation,* 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 180.

[174] Ibid.

[175] Center for Army Leadership, Graphic Training Aid (GTA) 22-06-007, "Leadership Attributes and Competencies Reference Card," 2016, Center for Army Leadership, accessed January 31, 2017, http://usacac.army.mil/sites/default/files/documents/mccoe/LARC.pdf.

Building upon the selected theoretical framework of Leads, Develops, and Achieves from the Army Doctrine Reference Publication number 6-22, the LARC further defines the subordinate categories of each leadership competency and provides supplementary qualitative terms. These terms and categories further describe each competency criteria. The card also provides a qualitative rating scale for rating the corresponding leaders' competencies. The qualitative assessment categories have five possible outcomes. These assessed outcomes are unobserved, unsatisfactory, capable, proficient, and excels. The unobserved category will be a null value when conducting the analysis. The lowest rating being unsatisfactory and the highest rating being excels.[176]

As an example, the leader competency of the Develops has four subcategories which further describe the competency. These subcategories are: "creates a positive environment and fosters spirit de Corps, prepares self, develops others, and stewards the profession."[177]

From the LARC there is a total of 47 subcategories for the research to conduct a qualitative analysis and assessment.[178] This number of coding terms is somewhat in line with the number Creswell describes in his use coding when conducting qualitative research. Creswell states, "he prefers to work with twenty-five to thirty categories in early data analysis, then strives to reduce and combine them into fix or six themes."[179]

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[176] Ibid.

[177] Ibid.

[178] Ibid.

[179] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation,* 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 180.

The intent for this research is no different. The research analysis initially has a large number of categories from which to choose from. As themes or patterns emerge, the research will then be able to reduce the categories, in the final analysis, to discuss only the salient points.

Finally, the verbiage of the coding will also be interwoven into each of the analytical essays to assist in the analysis of the data collection. As a reference, a copy of the Leads, Develops and Achieves tables from the LARC are placed in Appendix A as a reference point.

Research Questions

The primary research question is: How has the implementation of U.S. Army modular force structure affected the leader development of Signal Corps officers in tactical organizations?

The secondary research questions are:

1. What roles in leader development did the Division Signal Battalion fulfill before it was inactivated to support modularity?

2. How has the lack of signal leader development since the advent of modularity impacted the tactical signal force?

3. How does the 3rd Infantry Division's Signal Battalion (Provisional) propose to improve signal leader development?

Verification Standards

To verify the data this research will rely on four of the eight validity and reliability strategies discussed by Merriam. The strategies this research will use are, triangulation, member checks, peer review and examination, and researcher's position.[180]

The first strategy is that of triangulation. Since triangulation has been previously covered in the data collection portion of this chapter, no additional detail will be given in this particular essay. As a review, the definition of triangulation is, "using multiple investigators, sources of data, or data collection methods to confirm emerging findings."[181] The multiple types of source data from the past, present, and potential future of the Signal Corps will ultimately provide the triangulation through the three case studies. Through analysis of these case studies by the by axial coding, the research can answer each of the secondary research questions. The secondary research questions are both mutually complimentary and logical to provide a synthesis of information to answer the primary research questions.

The second strategy of member checks is defined as, "taking data and tentative interpretations back to the people from whom they were derived and asking if they are plausible."[182] In the case of this study, the Division Signal Battalion Commander will be provided an initial summary of the researcher's analysis and findings. This will also

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[180] Sharan B. Merriam, *Qualitative Research: A Guide to Design and Implementation,* 2nd ed. (San Francisco, CA: John Wiley and Sons, 2009), 229.

[181] Ibid.

[182] Ibid.

ensure that the Commander's viewpoints are being accurately reflected and not being skewed to support the research.

The third strategy of peer review and examination is defined as, "discussion with colleagues regarding the process of study, the congruency of emerging findings with the raw data, and tentative interpretations."[183] This strategy is accomplished by continual interaction with members of the research committee.

The fourth and final strategy of researchers position or reflexivity is defined as, "critical self-reflection by the researcher regarding assumptions, worldview, biases, theoretical orientation, and relationship to the study that may affect the investigation."[184] Since the researcher is a U.S. Army signal officer, it would be difficult, if not impossible, to believe that this research conducted is completely objective and unbiased in its results or findings. Rather than refuse this bias, the research accepts that the conclusions may produce a biased result. Additionally, the purpose of a qualitative research using the comparative case study methodology seeks a different purpose than quantitative research. Quantitative analysis can be more effective at reducing biases by focusing on the science of numbers and statistics, but the essence, the true meaning of the phenomenon is lost when it is taken out of context and reduced to ones and zeros. This research focuses on the deep understanding of the phenomenon, and so a level of bias is accepted.

In closing the essay will now review the author's logic map of the methodological framework. The figure below provides a visual representation of how the research

[183] Ibid.

[184] Ibid.

methodology will proceed. The first three steps identify the order in which case studies will be researched and coded. The fourth step taken is after the coding has been completed through a series of analytical essays. Each essay is based on the theoretical framework of Leads, Develops, and Achieves. These initial results of these essays will be then be taken through the verification standards before the research offers it final conclusions and recommendations.

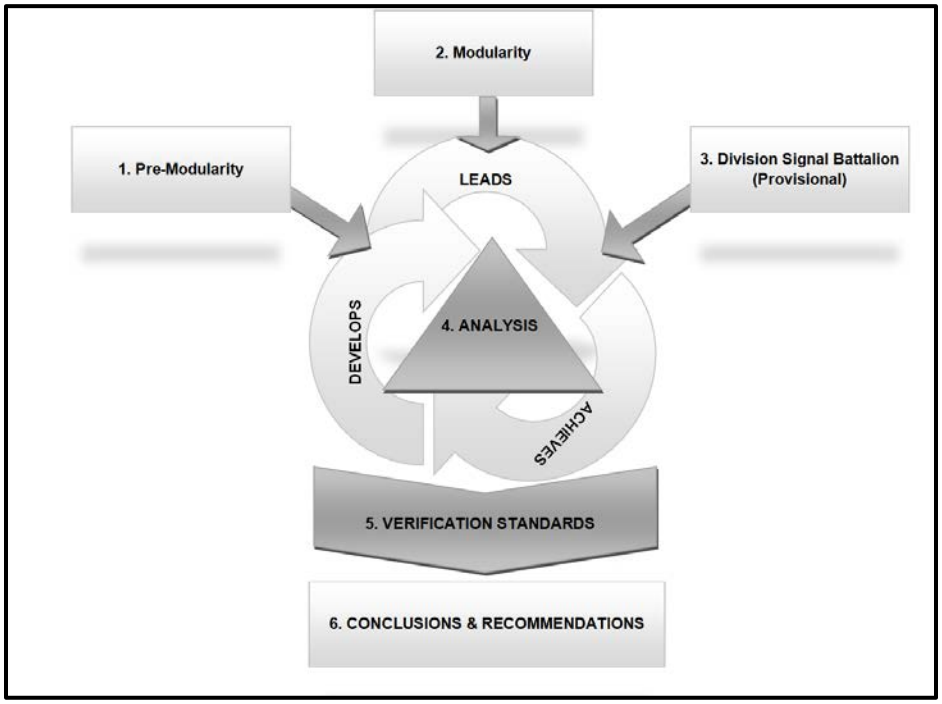

Figure 6. The Author's Logic Map of the Research Methodology

Source: Created by Author.

CHAPTER 4

FINDINGS AND ANALYSIS

Pre-Modular Signal Introduction

This introductory essay provides the reader with three things. The first is to review the primary data source used in the construction of the analytical essays as part of the case study. These analytical essays will be synthesized to answer the first, secondary research question: "What roles in leader development did the Division Signal Battalion fulfill before it was inactivated to support modularity?" Secondly, this essay will review why the researcher has chosen this particular primary source. Finally, the essay will provide an outline to the reader for the remainder of Pre-Modular case study portion of the research.

The primary source of the pre-modular case study is the monograph *Division-Level Communications 1962-1973* that is well written by Lieutenant General Charles R. Myer. General Myer's monograph chronicles the challenges, innovations, and successes, encountered by Army communicators during the Vietnam War. Then, Lieutenant Colonel Myer commanded the 69th Signal Battalion in Vietnam from November of 1965 until September of 1966.[185] General Myer is a significant leader within the Signal Corps. His career in the Corps spanned over 30 years and culminated as a Lieutenant General serving as the deputy director general of the NATO integrated communications

[185] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), iv, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

management agency in Europe in 1981.[186] Perhaps most significantly in 1974, General Myer was appointed to be, "Commandant, U. nited States Army Signal School and Commander, United States Army Signal Center."[187] This would have made him the equivalent of the present-day Chief of Signal. However, Myer does not hold this specific distinction as the office of the Chief of Signal did not exist from 1962 until 1986.[188]

A critique of this case study (possibly pointed out by the more technically inclined) may be that communications technology has advanced to such a degree in the almost 50 years since Vietnam, that a study of communications is irrelevant. Therefore, any lesson(s) learned cannot be suitably applied to the modern force. To those critics, it is important to point out that examination of the past for solutions and relevant experiences within the present are always a worthwhile endeavor.

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[186] Michael R. Patterson, "Charles Robert Myer, Lieutenant General, United States Army," Arlington National Cemetery, 2007, accessed April 20, 2017, http://www.arlingtoncemetery.net/crmyer.htm.

[187] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), iv, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[188] Signal Corps Regimental Association National Office. "Chief of Signal Roster," Signal Corps Regiment Association National Office, accessed April, 20, 2017, http://www.signalCorps.org/chief_of_signal.htm. A Major reorganization of the Department of the Army on 1 August 1962 placed the Chief Signal officer under the general staff supervision of the Deputy Chief of Staff for Operations (DCSOPS). According to Department of the Army General Order 28 dated 28 February 1964, the Chief Signal officer became the Chief of Communications-Electronics under DCSOPS and no longer held the duties as branch proponent for the Signal Corps. Beginning with the implementation of the U.S. Army Regimental System in 1986, the commandant of the U.S. Army Signal School was additionally designated as the Chief of Signal and the branch proponent for all Signal Soldiers and organizations in the U.S. Army.

Studying Vietnam era communications techniques, tactics and procedures are as relevant today as it would have been to an Army communicator 50 years ago when these operations took place. What remains unchanged are the core principles of leadership, training, planning, and installing communications networks. As an example, the same principles of radio wave propagation and planning for line of sight and radio networks holds as true today as it did then.

The research does acknowledge that as the communications technology has changed so has the equipment the Army uses to provide communications. However, the primary effect of this advancement is either a change in the force structure, a change in duty descriptions of the soldiers, or sometimes both of these instances occur. As an example, individual soldiers are no longer required to operate the many switchboards that still characterized the battles fought in Vietnam. These particular soldiers have been replaced by automation and the commercially available communications technology (routers and switches) of this era.

General Myer described the position as, "the Signal Battalion Commander had to develop something to ensure the [Division Commander had the] command and control communications . . . [he] needed.[189] The Battalion Commander did have help with his stuff but, "in the long run, it often boils down to the ingenuity of the Signal Battalion Commander in developing ways and finding means to get his all-important job done."[190]

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[189] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 31, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[190] Ibid.

In other words, it Division Signal Battalion Commander drew on all of his operational experiences to ensure the Division communications were supported. He would not be permitted to use the excuse of being dual-hatted as both a primary staff officer and Battalion Commander. He still had to ensure the message got through.

Finally, the outline of this case study will be first to conduct a strategic overview of the terrain and challenges associated with communicating in Vietnam. The overview gives the reader a sense of context if they are unfamiliar with Vietnam and the three geographical areas it is divided into. After the overview, the three analytical essays will follow. These essays that have been aligned to the theoretical framework of Leads, Develops, and Achieves. This alignment is a result of the coding conducted as part of the analysis of the primary data source. The final essay will synthesize all the gathered data to answer the first, secondary research question: "What roles in leader development did the Division Signal Battalion fulfill before it was inactivated to support modularity?"

A Strategic Overview of Vietnam Communications

To add context to the communications challenges a brief strategic overview of both terrain and the initial set of challenges must be discussed before moving into the individual analytical essays. This overview will provide a review of the three regions into which Vietnam is divided and then discuss the mission and challenges that communicators faced as the deployed to Vietnam.

The terrain in Vietnam is divided into three regions with each providing their own challenges to communication. The first area is that of Mekong Delta. The Mekong Delta "comprises the southern two-fifths of the country . . . [and] fertile alluvial plains, favored by heavy rainfall make it . . . one of the world's largest mud holes to troops operating

there."[191] The delta is characterized by its series of rivers, "which total in about 300 miles in length."[192] Because of the terrain within the delta, communications towers could not be readily erected to provide radio communications. Also, the main command and control operations took place on a Naval Ship, the USS Benewah, which offered its own unique communications challenges.[193]

The second region is the Highlands. The Highlands is the north to south mountain range with peaks and plateaus at various heights. The eastern side of the Highlands creates the naturally occurring border between Vietnam and Cambodia. This terrain has the effect of making communications from north to south particularly difficult as water drains from the mountain in the west to the eastern coastline.[194] Communications in this area were accomplished through a series of four hills that General Westmoreland's chief communications officer General Lotz identified, "as strategic territory to be held at all costs."[195] The four hills in total made up this strategic terrain, Nui Ba Den, Nui Ba Ra, Nui Chua Chan, and VC Hill, "formed a semicircular fan around Saigon of relays for

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[191] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 5, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[192] Ibid.

[193] Ibid., 50.

[194] Ibid., 5-7.

[195] John D. Bergen, *Military Communications: A Test for Technology*, United States Army in Vietnam Series (Washington, DC: U.S. Government Printing Office, 1986), 189, accessed March 21, 2017, http://history.army.mil/html/books/091/91-12/index.html.

multichannel systems connecting lowland bases and FM voice retransmission stations linking those bases with infantrymen slogging through swamps and jungles."[196]

The final region is the central lowlands. The central lowlands are the narrow strip between the highlands to the west and the South China Sea to the east. This area is also the most heavily populated of the three regions.[197] The central lowlands are the location U.S. forces were staged and primarily supported from throughout the Vietnam War.[198] This area is characterized by being both flat and a dense jungle terrain. Communications, if not properly planned or trained for, could easily be sparse and difficult to achieve.

Clearly, the terrain in all its characteristics was unforgivable. To overcome these challenges imposed by the terrain leadership and critical thinking had to be applied. The units deploying to Vietnam faced the additional challenge that there were few places in the United States the offered similar climatic or even terrain conditions. As a result, the majority of units which deployed to Vietnam never had the opportunity to experience the challenges they were about to face.[199]

The core task of communicators during the Vietnam War was to ensure that access to the Frequency Modulation (FM) network was available at all times. As General Myer stated, "probably no other single thing contributed more to the success of the tactical communication in Vietnam than the ability of the combat communicators to keep

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[196] Ibid.

[197] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 7, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[198] Ibid.

[199] Ibid., 23.

vital FM nets working under near impossible conditions."[200] The FM network provided critical the command and control capabilities of coordination, indirect fire support, and perhaps most importantly, medical evacuation. Indeed, access to the radio network could be a determinant link to survival given the perils faced.

Units that deployed to Vietnam also faced the challenge of being, "assigned much larger tactical areas of responsibility than those visualized in previous doctrine and training."[201] The signal leadership and communications were essentially asked to stretch, "the unit's organic communications capability beyond it limits."[202] This was all in a time when communications were primarily conducted point-to-point and could only communicate with each other if they had line of sight. Line of sight is limited by many things, but most notably is rarely planned for beyond 40 kilometers.[203] Planning ranges greater than 40 kilometers are begging to be difficult because the curvature of the earth must be incorporated into the signal planning.

Such were the communication challenges encountered in Vietnam by signal leaders at all ranks to test their competency. With some context and clarity provided, the first case study will now examine how communicators overcame these challenges through theoretical framework of Leads, Develops, and Achieves.

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[200] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 31, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[201] Ibid., 24.

[202] Ibid., 23.

[203] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-12.

Pre-Modular Signal Leads Findings and Analysis

This analytical essay will discuss how the Division Signal Battalion Commanders led their units. We first examine how effectively they were able to lead others as they prepared their respective units for deployment to Vietnam. Secondly, this essay will examine how the Signal Battalion Commanders were able to lead by setting the example in choosing the locations of command posts and the testing of communications equipment. Finally, the research examines when the Division Signal Battalion Commanders were able to extend influence beyond the chain of command by successfully incorporating augmented signal personnel into their formations.

The way in which leaders prepares their formations before a deployment is extremely telling of the type of leader and organization has. Some Signal Battalion Commanders had fewer obstacles to overcome than others. One such Commander who had fewer obstacles to deploying was Lieutenant Colonel Tom Nicholson. Colonel Nicholson commanded, "the 13th Signal Battalion supporting the 1st Cavalry Division [and] enjoyed those rare advantages of high priority on personnel fill, reasonable personnel stability, new equipment and an exceptional esprit de corps stemming from the challenging new mission of airmobility [sic] that had prompted the initial organization of the unit."[204] In other words, Colonel Nicholson had the advantages of being selected for command within one of the Army's premiere units.

[204] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 11, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

Even having all the previously listed advantages it does not negate the role that the Battalion Commander has an organizational leader of that Battalion. Colonel Nicholson still had to provide the training, readiness, and oversight of that Battalion. He still had to develop his subordinate officers to ensure they could accomplish the mission they were assigned to support. If you have ever watched the movie or read the book, *We Were Soldiers Once…and Young* it was Colonel Nicholson's 13th Signal Battalion and signal leaders and soldiers under his oversight that provided the communications during that battle.[205]

The experiences had by Lieutenant Colonel John H. Reeder were opposite those of Colonel Nicholson and the 13th Signal Battalion. Colonel Reeder commanded the 9th Signal Battalion supporting the 9th Infantry Division.[206] The 9th Infantry Division was activated on 1 February 1966 to address the shortage of Division that were available for deployment to Vietnam.[207] Since the unit was newly activated, most of the assigned soldiers, "arrived directly from civilian life through the reception station and remained with the Division from its activation through its training cycle and into combat."[208] When Colonel Reeder took command of the Battalion he, "found himself with a functioning

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[205] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 29, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[206] Rebecca Robbins Raines, *Signal Corps,* Army Lineage Series (Washington, DC: Center of Military History United States Army, 2005), 89, accessed January 22, 2017, http://www.history.army.mil/html/books/060/60-15-1/CMH_Pub_60-15-1.pdf.

[207] Ibid.

[208] Ibid.

Signal Battalion in which he was the only officer and in which the total strength was about 150 enlisted men. First sergeants were used as Company Commanders, and non-commissioned officers filled all the key Battalion staff officer positions."[209]

Colonel Reeder moved extremely quickly and effectively to prepare his Battalion for the deployment. The first two things he did was to create "a complete training program and laid the groundwork for the eventual fill of the Battalion."[210] The creation of this training program focused on not only the training of junior soldiers but also the non-commissioned and commissioned officers. The establishment of this internal Battalion training program was critical since, "officer assignments to the Battalion were slow and officers that were assigned had, for the most part, no tactical communications experience."[211] The training program was developed, "to make up for this lack of experience."[212]

Reflecting on the action Colonel Reeder took as he arrived at his position, one can get a sense how critical Colonel Reeder's position was. There is no doubt that Colonel Reeder had to draw from his experiences in all four the Army's identified learning domains of, "the institutional schooling, self-development, realistic training, and

[209] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 19, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[210] Ibid.

[211] Ibid.

[212] Ibid.

professional experience."[213] He may not have organized it in regards to that specific framework, but he undoubtedly considered them when leading the development of this training pipeline. Colonel Reeder effectively leveraged his entire career knowledge, as well of those who served alongside him, to shape a training program that effectively prepared the untested and 9th Signal Battalion for deployment.

The next action Colonel Reeder took to effectively prepare his force was to ensure they were properly equipped. He did this by studying the lessons learned from his fellow Signal Battalion Commanders already deployed to Vietnam. Colonel Reeder was aware that Signal Battalions across the country had to assemble and erect, sometimes as tall as 200 foot antennas to ensure the Divisional FM and multi-channel radios worked. He also knew about the heat and humidity that would sometimes cause the temperatures within the signal shelters to rise as high as 110-120 degrees Fahrenheit during the day.[214] To meet these operational challenges the Signal Battalion, "quickly obtained antenna towers and air conditioners for signal vans."[215]

Colonel Reeder's ability to seek the information, understand the key equipment that was necessary to conduct the mission, and finally ensure his signal force was equipped with those resources cannot be understated. Colonel Reeder needed to have

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[213] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 1-4.

[214] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 33, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[215] John D. Bergen, *Military Communications: A Test for Technology*, United States Army in Vietnam Series (Washington, DC: U.S. Government Printing Office, 1986), 216.

either a strong informal network with his fellow signal officers, knew where to get the after-action reports, or perhaps both, to know what he did. It is also worth pointing that in an age before the internet obtaining this information would have been far more difficult than it is today. Today, leaders have searchable cataloged online resources that allow the sharing of information. Additionally, Colonel Reeder had to used his influence and experience to convince the senior Divisional leadership why this equipment so needed. Because of this, the 9th Signal Battalion was able to deploy, at least in regards to their equipment, a step ahead of their fellow Signal Battalions.

Finally, Colonel Reeder knew that 2nd Brigade, 9th Infantry Division would be conducting, "joint [riverine] operations with the Navy on the 2,400 kilometers of rivers and 4,000 kilometers of canals in the [Mekong] delta."[216] Colonel Reeder sent Major Plotkin, one his best Brigade Signal Officers forward to ensure that the Army communications packages were installed correctly on the U.S. naval ships operating within the delta to include the future Brigade command post, the USS *Benewah*. Major Plotkin made a key observation while aboard the *Benewah* by recognizing the ship's communications plan needed to reconfigured "so that the operator could patch equipment temporarily where it stood."[217] This modification was critical since precious time would be saved if and when communications circuits had to manually rerouted and patched

[216] Ibid.

[217] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 53, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

aboard the ship.[218] This task was much easier said than done. All communications systems are hardwired into naval ships and not easily changed or modified. However, through persistence and dedication, Major Plotkin's modifications were completed.

Colonel Reeder took direct action to build trust in his subordinate Brigade Signal Officer by sending him forward ahead the Brigade and in doing so reduce the identified friction as much as possible. Not only is Colonel Reeder building trust with his subordinate signal officer, but he is also building trust with that Brigade Commander. This climate of trust was sustained as *Benewah* was ready to serve as a functioning Brigade command post when 2nd Brigade arrived.

The next example of leader development returns to Colonel Nicholson the 13th Signal Battalion. Colonel Nicholson led by example and oversaw the communications plan to ensure that it meet the requirements set out by the Commander. Within the 1st Cavalry Division, Major General Kinnard, "gave total responsibility for command post selection to the Division signal officer and the G-3."[219] Colonel Nicholson, firmly believed that selected command sites must not only be selected based on analysis of the terrain, but also by conducting communications tests at the actual site before making a final decision on the command post's location. Colonel Nicholson explained his logic as, "there are too many variables such as effects on tropospheric conditions, reflecting terrain

[218] Ibid.

[219] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 28, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

features and freak conditions that make transmitting and receiving possible at places the 'profile' says that it cannot be done."[220]

Because of Colonel Nicholson insistence and leadership, one operation saw, "twelve different locations within a ninety-mile radius of An Khe [that] were physically tested."[221] When the tests were complete, the best site was selected based on analysis by the Division G-3 and signal officer. The work which went into testing the non-selected sites did not go in vain. These sites became potential subsequent and subordinate command locations.[222]

Colonel Nicholson is leading by example by demonstrating an understanding of both technical and tactical competence by conducting communications testing at each potential Division command post location. He is providing an example to all of his subordinate communicators by demonstrating the lengths that he will go to support his Commander. By testing each site, Colonel Nicholson is sending a strong message to his subordinate signal officers, that to the greatest extent possible they should do the same to support their Commanders. Getting on the ground and establishing the command post is the wrong time to discover the communications do not work.

Finally, the research examines how the Signal Battalion Commanders were able to extend their influence beyond their command to build consensus and resolve conflict in the incorporation of augmented signal personnel. The signal augmentees would arrive

[220] Ibid., 29.

[221] Ibid., 28.

[222] Ibid.

when the Divisions internal signal resources could no longer meet the demands of the mission. These augmentees would typically be assigned from 1st Signal Brigade. This Brigade was activated specifically to provide communication support in Vietnam on 1 April 1966.[223] The mission of 1st Signal Brigade was to provide command and control of "communications from the Division upward to field force [in Vietnam]."[224]

This augmented support drew criticisms from two Division Signal Battalion Commanders. Lieutenant Colonels Tom Nicholson (1st Cavalry Division) and Tom Ferguson (25th Infantry Division) believed that the supporting signal teams should be directly attached to their unit. In their opinion, "too many times it appeared as if these units were abandoned by their headquarters [1st Signal Brigade] in that it was seldom that a senior staff officer or Commander appeared to check the operations or welfare of his unit's men."[225]

From their perspective, because the communications augmentees were supporting at or below the Division level, the Signal Battalions should receive attachment of the units. Secondly, they wanted the augmentees to be attached, because if the communications the augmentees were supporting did indeed fail, the Division

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[223] Rebecca Robbins Raines, *Signal Corps,* Army Lineage Series (Washington, DC: Center of Military History United States Army, 2005), 24, accessed January 22, 2017, http://www.history.army.mil/html/books/060/60-15-1/CMH_Pub_60-15-1.pdf.

[224] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 28, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[225] Ibid., 27.

Commander would hold the Division Signal Battalion Commander responsible.[226] Both sides presented a rational and logical argument from their respective leaders. The core concept of what they are asking for is to have the ability to shape and develop these augmented soldiers to a mission that best matched the Division's purpose. In other words, they wanted them to be on their team and to support them the way they believed they should be supported.

General Myer commanded a Battalion that provided augmented signal support in the form of an entire Signal Company which supported the 1st Infantry Division. Below is his Commander's intent for support given to his Company Commander:

> Our Battalion had an entire [augmentee] Company supporting the 121st Signal Battalion of the 1st Infantry Division in its basecamp at Di An. The Company worked in close and continuous harmony with the companies of the Signal Battalion but with the clear understanding that any tasking to that Company had to come from me with the approval of the 1st Signal Brigade Commander. I insisted that the Company Commander be fully responsive in offering assistance to the Division Signal Battalion Commander consistent with his own mission requirements, and I am convinced that this arrangement worked satisfactorily for all parties concerned. [227]

General Myer's approach, while different, was also perceived to be effective at providing the type of support needed to enable the Divisions Signal Battalion Commanders best. What is important to note about this discussion is the level of officers in which this is taking place. All of these officers are Battalion Commanders who are concerned for the soldiers and making sure they are integrated and part of the team.

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[226] Ibid.

[227] Ibid., 28.

In the end the, the 1st Signal Brigade Commander, General Terry decided ultimately that the augmentees would remain under the tasking authority and control of 1st Signal Brigade. The decision was made because General Terry, "could not tolerate an upward communication link failure that was attributable to a 1st Signal Brigade unit at the Division base camp and caused by the Division Signal Battalion Commander imposing a precedence mission or taking on the Brigade unit."[228]

Pre-Modular Signal Develops Findings and Analysis

The second analytical essay focuses on how the Division Signal Battalion Commander's developed his subordinate signal officers. The essay will first focus on the how the Division Signal Battalion Commanders were a source of counseling, coaching and mentoring to the force. The second portion of the essay will discuss how the Signal Battalion Commanders created a positive environment and fostered esprit de corps.

The Division Signal Battalion's role in the development of the deploying force was reinforced by the Commander's role as a source of one on one leader development and mentoring of signal officers within the Division. The only indirect observation the research can analyze is the how the Division Signal Battalion Commander conducted talent management to place signal officers within the Division successfully.

Both the 101st Airborne Division and 1st Cavalry Division commanding generals believed that responsibility of placing all signal officers within the Battalions and Brigades should belong to the Division Signal Battalion Commander. Lieutenant Colonel "Swede" Nelson who commanded the 501st Signal Battalion supporting the 101st

[228] Ibid.

Airborne Division was given, "full responsibility for signal officer assignments within the Division, and he selected the most qualified people with previous experiences in infantry communications as the communications officers for the Brigades and Battalions."[229] Understanding that previous experience was not enough to guarantee success Colonel Nelson also "required that officers spend some time in the Division Signal Battalion before assuming their duties with the combat unit."[230]

Lieutenant Colonel Nicholson who commanded the 511th Signal Battalion of the 1st Cavalry Division (later redesignated the 13th Signal Battalion) also had, "full responsibility to assign or replace all signal officers in the Division, including those at Brigade and combat arms Battalion levels."[231] Colonel Nicholson said this responsibility to assign officers within the Division to best match their talents was, "a major contributing factor in the cohesiveness of the communications structure within the Division when it arrived in Vietnam."[232] The ability to determine where signal officers are the best fit within the Division is a significantly different process than the manner in which assignments work currently within the Army.

Today's assignment process allocates officers based on requisitions submitted by units stating the need for a specific type and rank of officer. Human resources command

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[229] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 18, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[230] Ibid., 11.

[231] Ibid., 18.

[232] Ibid.

uses the officer's previous assignment experience and evaluation reports in an attempt to place the officer where they will be the most successful. When a company grade officer in-processes an installation, they typically go to the unit that human resources command assigned them to without any interview process other than the limited personal interaction they may have had with their assignments officer.

What the Signal Battalion Commanders were able to provide when assigning signal officers across the Division was to ensure that the signal officer going to a unit was a good as a fit as possible. Secondly, spending time on the Battalion staff further developed the officer so they understood the roles and responsibilities they would be expected to perform. In other words, they knew the standards. The extra time on staff also gave the Battalion Commander and senior staff the time and ability to get to know the officer more for better or for worse. Some officers may have interviewed well and not been as effective as staff officer as their interviewed might have lead the Battalion Commander to believe. Other officers could have been the exact opposite in that they interviewed poorly and performed exceptionally. Regardless, the Division Signal Battalion Commander was able to assess his signal leaders and place them in positions that would make them and their units successful.

Having examined how talent management contributed to the leader development of signal officers, the essay will now examine how the Commanders were able to build teams by creating a positive environment. Training, readiness, and oversight were also accomplished extremely competently within the 151st Signal Battalion. As previously noted, the air mobility mission of the 1st Cavalry Division gave this particular Signal Battalion perhaps the most ideal set of circumstances regarding equipment, training, and

stable personnel situation. Overall, the 151st Signal Battalion was a "group that had been largely stable for two years."[233] The Battalion Commander knew and understood he had the, "good fortune at having had the opportunity to organize, form, and train the unit from the start."[234] This type of stability allows the Signal Battalion Commander the time needed to professionally develop and assess his officers. In addition to the talent management discussed earlier, that Battalion Commander now had ample opportunity to watch and further mentor his signal officers as they learned the tactics and techniques of communications specific to their air mobility mission. In addition to the leader development process shaped by the Commander, the Battalion staff, Company Commanders, and Platoon Leaders were all sharing the experiences and lessons learned within the organization. The combined peer-to-peer involvement assuredly made the organization better and improved the performance.

The 25th Infantry Division's Signal Battalion commanded by Lieutenant Colonel Tom Ferguson also spoke of the key to being able to train and build the team required before deployment:

> Nearly 75 percent of the officers and men who accompanied the Battalion to Vietnam had the opportunity to train with the Division for nearly eighteen months before their deployment. The 25th, like many other combat units, also received many young soldiers straight from basic combat training with the understanding that the unit would provide the advanced individual training from its own resources. The Signal Battalion received close to a hundred of these soldiers and proceeded to provide on-the-job training in radio and wire specialties. The

[233] Ibid.

[234] Ibid.

> Battalion Commander felt that these soldiers were as well qualified when they arrived in Vietnam as were those from the formal schools.[235]

The results of this previous 18 months of training before deployment produced a unit that was extremely competent and effective tactical signal force. In his evaluation of the important role the tactical communicators had in 25th Infantry Division's success, the commanding general, Major General Frederick C. Weyand stated the following:

> The modern communications systems employed in support of operation extend, as never before, the voice of the Commander on the battlefield. Appreciation of this vast network is perhaps never greater than when a beleaguered tactical Commander is able to call for and have artillery fire and airstrikes on target within a few minutes. The responsive Signal Corps systems that save valuable seconds have doubtlessly saved lives also. To be without reliable communications at critical moments could easily afford the enemy the momentary advantage he seeks. [236]

In summary, this essay has reviewed how the Division Signal Battalion Commanders developed their subordinates as well as their teams. This competency was first assessed through how the Division Signal Battalion Commander developed his subordinate officers by conducting what is labeled today as talent management. This talent management ensured that signal officers assigned to their respective Battalions were the best fit for the force. Secondly, this competency was analyzed through the Commander's role in the creation of a positive learning environment that fostered the esprit de corps and concluded with how this development ability directly led to the success of the 25th Infantry Division.

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[235] Ibid.

[236] Ibid., 47.

Pre-Modular Signal Achieves Findings and Analysis

The final analytical essay in this case study focuses on the achievements of the Division Signal Battalions during Vietnam. Since communications during this period were primarily defined by the use of Frequency Modulation (FM) and multi-channel radios systems, the achievements come from these two communications technologies. As a review, it is important to review how the Army Doctrine Reference Publication *Leadership* defines achieving. The definition is the "ability to get results is a function of how well they integrate their performance on all the leader competencies sections."[237] The two key words from this quote are results and integrate. Getting results in not simply enough if those results are not integrated as part of a larger plan that fits within the Commander's intent. After all, getting results means very little it does not further the cause of, "to fight and win our Nation's wars."[238]

This essay will focus on the communicators who plied the efforts of their trade to that endeavor. The first section will discuss how the Division Signal Battalion Commanders were able to overcome the leadership challenges and operate FM communications contiguously on the battlefield. The second portion of the essay will discuss the evolution of and subsequent sharing of a communications platform able to be transported by helicopter to wherever it was needed. The final portion of the essay will

[237] Department of the Army, Army Doctrine Reference Publication 6-22, *Army Leadership* (Washington, DC: Government Printing Office, August 2012), 11-9.

[238] Department of the Army, "U.S. Army Mission Statement," U.S. Army Information, accessed April 21, 2017, https://www.army.mil/info/organization/.

discuss the work of one Division Signal Battalion Commander to bring radio-wire integration technology to his unit and examine his challenges with this integration.

During the Vietnam war, the measure of the success could be directly attributed to how effective the FM coverage was maintained throughout the operational area since, "the workhorse of tactical communications in Vietnam was, without question, the FM radio"[239] Creating and establishing the FM network was the primary concern of the Division Signal Battalions during Vietnam. However, there were two main obstacles that prevented them from achieving this goal. The first was, "the Signal Battalion table of organization and equipment . . . was not structured to the demand of Southeast Asia."[240] It is unclear if the lessons from World War II and the implementation of the cellular communications had been forgotten or was not a sustainable force model at this time. What was clear was that the Army communicators faced an all too familiar challenge. How to support a Commander with legitimate requirements with too few soldiers and equipment never designed to do what it was now asked to do.[241]

The second challenge was the congested frequency spectrum that caused significant problems to operations. Both Lieutenant Colonels Ferguson and Nicholson spoke of the initial difficulties of communicating with limited frequency availability.[242]

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[239] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 101, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[240] Ibid., 31.

[241] Ibid.

[242] Ibid., 25.

Because of the inability to deconflict frequencies the systemic process was, "massive 'bootlegging' with the ripple effect of even more mutual interference through the combat theater."[243] Because of these problems, it took the personal intervention of these two officers to begin to relieve some of the frequency congestion that was too common in Vietnam.

Lieutenant Tom Nicholson's contributions to talking FM began even before his arrival in Vietnam. Because of his position as a Signal Battalion Commander in an airmobility Division he, "asked the U.S. Army Electronics Command for assistance in designing and fabricating an airborne tactical operations center to be installed in the UH-1 helicopter" as early as 1964.[244] The development of the aerial command and control platform represented a significant capability improvement in Vietnam. Within the dense jungles, one could not only lose his perspective of the situation, but he could also lose communications with his adjacent units.

To be compatible the helicopter would need to, "use the same type of radios as used by ground maneuver units."[245] The use of ground radios as opposed to avionic radios has two distinct advantages. The first was that it allowed the "rapid replacement of a damaged or inoperative radio at almost any supply point or Battalion maintenance

[243] Ibid., 27.

[244] Ibid., 14.

[245] Ibid., 15.

facility within the Division area."[246] The second advantage was that the ground radios "had a greater range because of their higher average power output."[247]

LTC Nicholson's 13th Signal Battalion in addition to developing the UH-1 command platform, also incorporated the use of fixed wing aircraft (airplane) to perform as an airborne radio relay station. This aircraft was used in multiple operations but most notably, "during Operation Silver Bayonet (23 October-20 November 1965) [which] included the battle of the Ia Drang Valley."[248] The concept of this relay was to fly "in orbit at 10,000 feet over the widely dispersed combat units and retransmitted FM voice messages for most of the key command nets directing the operations."[249] Both of these achievements represent a considerable contribution to the Army's communication technology. The same principle of a command and control helicopter is still used today by Army Commanders to control the pace and tempo of battle. The use of fix wing aircraft has since migrated from manned systems to unmanned aerial vehicles as part of the airborne communications relay system.[250]

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[246] Ibid.

[247] Ibid.

[248] Ibid., 29.

[249] Ibid., 30.

[250] Mark Root, "Northrop Grumman's Unmanned Aircraft System Successfully Demonstrates Communications Relay Payload during Multiple Flights," Northrop Grumman, accessed April, 21, 2017, http://news.northropgrumman.com/news/releases/northrop-grumman-s-bat-tm-unmanned-aircraft-system-successfully-demonstrates-communications-relay-payload-during-multiple-flights.

The 121st Signal Battalion in support of 1st Infantry Division was fortunate that within their area of operations they had the famous, "dominant high point [of] . . . Nui Ba Den"[251] Nu Ba Den was high enough that initially, it proved to be sufficient for coverage of the Division's entire area of operations. However, General DePuy, the commanding general of 1st Infantry Division, was an aggressive leader with a "penchant for establishing tactical command posts and fire bases wherever [the] action was heaviest."[252] With these requirements for command and control, Lieutenant Colonel James Rockwell realized the capabilities Nui Ba Den provided were, "not enough to accommodate the relatively flat and heavily forested terrain throughout the area."[253]

To overcome this, and ensure the Division Commander had the command and control he was asking for, fixed towers, "which could be erected to over two hundred feet" were installed throughout the area of operations.[254] Of note, Myer professes that "although not normally found [in] the Signal Battalion table of organization and equipment, a number of fixed towers began to appear at critical points."[255] Reading between the lines, it is apparent two hundred foot towers simply do not "appear at critical

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[251] Charles R. Myer, *Division-Level Communications, 1962-1973*, Vietnam Studies (Washington, DC: Government Printing Office, 1982), 31, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[252] Ibid., 38.

[253] Ibid., 39.

[254] Ibid.

[255] Ibid.

points." Clearly, senior leadership had involvement in the acquirement and placement of these towers.

The 125th Signal Battalion commanded by Lieutenant Colonel Tom Ferguson and supporting the 25th Infantry Division had to solve the problem of quickly getting tactical communications platforms in and out of difficult to reach locations reliably to support operations. One of the primary signal systems of that era was the AN/MRC-69 radio relay carrier terminal. This communications terminal had the capability of supplying, "twenty-four telephone channels and twelve teletypewriter channels."[256] The equipment was installed inside a communications shelter on the back of a two-and-a-half-ton truck.[257] While this truck was capable of mobility on improved surfaces, it did not move effectively in the terrain that was present in Vietnam. Additionally, the requirement for this capability began to be a requirement down to the Battalion and artillery Battery level.[258] To meet these demands the Signal Battalion removed, one twelve channel systems [and] mounted [the system] in a three-quarter ton trailer."[259] Since it was roughly half the capability of the MRC-69 shelter, it became known as, "MRC-34½."[260] This new

[256] Ibid., 82.

[257] Ibid., 38.

[258] Ibid., 32.

[259] Ibid., 82.

[260] Ibid., 38.

shelter was, “far easier to move by helicopter” but had the disadvantage of once it was dropped that was where it remained.[261]

The idea and development of the MRC-34½ communications package was shared with the other Division Signal Battalions. 121st Signal Battalion later used in in Operation El Paso II. The use of these easily airlifted communications packages was useful as ten separate command post locations . . . were supported simultaneously [and] many of these [locations] were inaccessible by road.”[262]

Big Red One’s (1st Infantry Division), Division Signal Battalion Commander was Lieutenant Colonel James M. Rockwell. Colonel Rockwell’s previous assignment was the executive officer of the 69th Signal Battalion. This Battalion participated in exercise GOLDFIRE at Fort Leonard Wood, Missouri and supported “an area even larger than the tactical area of responsibility of the Big Red One.”[263] A key component of the success of that exercise was due in large part to the use of radio-wire integration (RWI). Radio-wire integration is an, “an interconnection of wire circuits with radio facilities.”[264] In plainer and simpler terms, it allows the use of the tactical radio network to contact others who are using the tactical telephone network.

Colonel Rockwell also knew and understood his Division Commander, General DePuy, was someone who had been pushing the communications abilities to new limits

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[261] Ibid., 32.

[262] Ibid., 38.

[263] Ibid., 41.

[264] John D. Bergen, *Military Communications: A Test for Technology*. United States Army in Vietnam (Washington, DC: U.S. Government Printing Office, 1986), 495.

since 1st Infantry Division had arrived in theater.[265] He also recognized the immediate need to implement a radio-wire integration system because he had seen it previously work successfully. He understood the type of mission enhancing capabilities this equipment could add in support of combat operations. Colonel Rockwell describes his implementation process below:

> Naturally, I was not about to announce to the Division that we had an RWI system until I was certain it had been installed and was fully operational, so we had several weeks of tests . . . Finally, I was convinced that we had a good operational system and prepared to announce it at one of the evening briefings when the following incident occurred: I was aloft with General DePuy . . . and a call came in on the FM command net from the Division TOC stating that General DePuy was to call the II Field Force Commander by telephone ASAP. [266]

Colonel Rockwell then informed General DePuy of the RWI system they had been installing and testing the past few weeks. He explained to the General that through this system there was no need to fly his command helicopter back to the Division tactical operations center. He could simply call the II Field Force Commander from his current position within the helicopter. General DePuy then placed the call as he had informed by Colonel Rockwell to do. However, there was only silence on the other end of the line, so General DePuy and Colonel Rockwell flew back to the Division tactical operations center to make the call.[267]

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[265] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 41, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[266] Ibid.

[267] Ibid.

One could easily imagine the frustration that Colonel Rockwell must have experienced. He had overseen the planning, integration, and testing of a mission enhancing capability system that he knew worked. At the moment that could have been an achievement, his efforts were met with failure. After receiving "some friendly chiding at the staff meeting about the excellence of the system, Colonel Rockwell went immediately to the base camp to determine the problem."[268] Colonel Rockwell immediately discovered the problem upon arriving at the base camp and speaking with the system operators. Colonel Rockwell explains what happened below:

> The operator who, when he found that General DePuy himself was placing the call, got panicked and just clammed up and was afraid to respond. Well that was easily fixed, and about a week later we were again a lot and again had to make a phone call. This time he [General DePuy] suggested that RWI system. We initiated the call, and it went through beautifully .[269]

Colonel Rockwell clearly acted on what in today's doctrine is known as the philosophy of mission command by displaying "disciplined initiative within the Commander's intent to empower agile and adaptive leaders."[270] He did this by first knowing his Commander's intent. Colonel Rockwell further identified a capability requirement that he knew existed from his previous operational experiences and began to plan, test, and implement this solution. The initial setback of the call not going through while in the helicopter was not due to anyone's lack of technical capability or

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[268] Ibid., 42.

[269] Ibid.

[270] Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, 2014), 1.

competency. The problem was in the human domain, therefore, able to be addressed by leadership.

The closest definition the Army has to define the human domain is, "optimizing human performance through building resilient soldiers, adaptive leaders, and cohesive teams." [271] In other words, it is recognition that humans are part of the system. That even technical expertise, thorough planning, or disciplined initiative can be offset if leadership development is not applied the soldiers, non-commissioned officers, and officers within the unit.

The RWI proved to be the mission enhancing capability that Colonel Rockwell imagined:

> Soon the assistant Division Commanders, Brigade Command and Staff were introduced to it and became frequent users. It was even made available to maneuver Battalion Commanders, who became the prime users. They soon learned that when isolated in the middle of the jungle they could go through their . . . radios to communicate with their staffs.[272]

Clearly, Colonel Rockwell's persistence paid off. What is exceptional is that this system was able to enable Commanders two levels down within the Battalion formation in the conduct of tactical radio operations. The leadership and operational experiences that a senior signal officer provides is part of the leader development. It directly contributes to the leader development of his subordinate signal officers because it

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[271] U.S. Army Combined Arms Center, "The Human Dimension White Paper: A Framework for Optimizing Human Performance" (Fort Leavenworth, KS: Government Printing Office, 2014), 24, accessed April 20, 2017, http://usacac.army.mil/sites/default/files/documents/cact/HumanDimensionWhitePaper.pdf.

[272] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 42, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

provides an excellent example of leadership. Colonel Rockwell demonstrated this leadership by planning, installing, and testing the RWI system. When the system encountered difficulties, he then used his acumen as a leader to correct the deficiency. There is no doubt the because of Colonel Rockwell's efforts; subordinate signal officers were developed as they watched and emulated this leader's actions.

What Roles in Leader Development did the Division Signal Battalion Fulfill Before it Was Inactivated to Support Modularity?

Analysis of this case study has identified three critical roles the Division Signal Battalion had in the leadership development of signal officers. The first role was that it provided a senior signal leader within the Division to provide signal centric training, readiness, and oversight to the Division and subordinate signal organizations. The second role the Division Signal Battalion had in leader development had was to conduct talent management of the signal officers within the Division. The final role the Battalion fulfilled was creating a professional relationship between peers that allowed communications successes on the battlefield to be shared.

The first role the Division Signal Battalion provided was a senior signal leader who led in the training, readiness, and oversight of the Battalion. This oversight directly contributed to the success of the organization as the subordinate leaders were developed through signal centric training and equipping. Perhaps the best example from this case study is the 9th Signal Battalion that supported the 9th Infantry Division. The Battalion Commander of the 9th Signal Battalion played a critical role in leader development as he oversaw the development of a Battalion wide training curriculum from the lowest private in this Battalion to the non-commissioned and commissioned officers.

Secondly, utilizing his relationships outside the Battalion, Colonel Reeder knew the right equipment that was needed to make his Battalion successful. Because of this, his subordinate leaders were given an example of leadership to emulate. Colonel Reeder fully understood the multiple challenges that were required to take a signal Battalion that was just being stood up into combat. He brought the requisite level of operational experience that developed his leaders to perform their mission successfully.

The second role the Division Signal Battalion provided was also led by the Battalion Commander as he conducted the talent management of signal officers throughout the Division. The talent management process allowed the Commander to assess officers and determine the best fit within the Division. Additionally, the ability to control officer's assignments within the Division ensured the officer had sufficient signal leader development before being assigned to a subordinate Brigade or Battalion. Comparing this model of talent management to the current model of signal officer talent management allows us to see the advantage in leader development. Currently, signal officers are assigned against requisitions from human resources command. Human resources command compares the officer's previous duty assignments and evaluation reports in an attempt to find the best fit for that officer. However, the on paper fit, may not necessarily be best for the officer or unit one he arrives on the ground.

The final role the Division Signal Battalion had in the leader development of signal officers was that it created a professional relationship between peers. These professional relationships benefited the force as ideas and achievements were able to rapidly be shared and implemented with fellow Division Signal Battalion Commanders. The Achieves analytical essay provides multiple examples of how communications led

by their Signal Battalion Commanders overcame the adverse communications environment of Vietnam to meet the capability their Commander needed. One example was the creation of MRC-34½. This communications platform enabled a Commander to rapidly insert a communications capability in the most needed area via helicopter. This innovation was something which had not existed before Signal Battalion arrived in Vietnam. When this lesson was shared, it was adopted by multiple Signal Battalions. The desire or will to achieve combined with the demonstration of how to have success in a technology-driven field such as Signal Corps further contributed the leader development of subordinate officers. The junior signal officers now had senior signal officers they would want to emulate these because they were successful.

In summary, research indicates that the Division Signal Battalion fulfilled three primary leader development roles. The first was to provide a senior signal officer that was able to provide the training, readiness, and oversight through an effective training program. The second role of the Division Signal Battalion had was to provide the talent management of the signal officers within the Division. The final role Division Signal Battalion fulfilled was the creation of a system in which ideas, achievements, and strategies could be rapidly shared and implemented.

Modular Signal Introduction

The purpose of this introduction is first to discuss the goal of this case study, the primary sources and why they were chosen, and finally, to provide a preview of the material the will be reviewed within this case study.

First of all, the primary purpose of the case study is to answer the second, secondary research question: “How has the lack of signal leader development since the

advent of modularity impacted the tactical signal force?" Three analytical essays have been written with the purpose of answering this secondary research question. Each essay follows the theoretical framework of Leads, Develops, and Achieves.

The primary source data for this case study is the review and analysis of semi-structured interviews conducted with signal officers. These interviews were conducted by the Combat Studies Institute to support the Operational Leadership Experiences Project.[273] The interviews featured in this case study were conducted in between 2007 to 2012. However, the information provided from the interviews stretches back as far as 2003. The research uses these documents as the principal source data because they contain the primary accounts of the experiences of signal officers who have undergone leadership development in the modular brigade. The responses from these semi-structure interviews have been coded to be organized within the theoretical framework. After being coded the responses were subsequently analyzed and organized to create the case study. It is important to note that since essays were coded, the same person may have responses in different analytical essays.

Finally, within each analytical essay the following topics will be discussed. The Leads analytical essay will first discuss training management and the relationships between signal officers within the modular brigade. The Develops essay discusses how signal centric leader development programs are or in some cases are not being implemented within modular brigades. The Achieves analytical essay discusses some of the signal support to operations encountered by signal officers in modular brigades. This

[273] Combat Studies Institute, "Operational Leadership Experiences Project (OLE)," accessed May 5, 2017, http://usacac.army.mil/organizations/cace/csi/ole.

essay concludes with a review and discussion of insights provided by a signal observer and controller from the National Training Center (NTC). The findings and analysis of these essays will form the response to the secondary research question of: "How has the lack of signal leader development since the advent of modularity impacted the tactical signal force?"

In summary, this introductory essay first discussed the purpose of this case study. The essay then reviewed the primary source data that was used and why that data was chosen for this particular case study. The essay has concluded by reviewing the major topics that will be covered in each analytical essay before answering the secondary research question.

Modular Signal Leads Findings and Analysis

Preparing soldiers to, "deploy engage and destroy the enemies of the United States of America in close combat" is perhaps the ultimate measure in how effective leadership may be evaluated.[274] With the Division Signal Battalion no longer in the force structure signal leaders had to use their experiences and judgment to prepare their forces the best way they knew how. One officer interviewed by the Combat Studies Institute was then Major Jack Sander. The research is improved and further validated by being able to incorporate now, Lieutenant Colonel (Promotable), Sander's input because of his

[274] Department of the Army, "The Soldiers Creed," accessed March 23, 2017, https://www.army.mil/values/soldiers.html.

Department of the Army centralized selection to command one of the nine Signal Brigade and Corps G6 positions in fiscal year 2018.[275]

In his operational leadership experiences interview, Major Sander describes how his predeployment experience was successful because as a field grade Company Commander he had the requisite level of experience to determine which training was needed the most. "It was very easy for us to pick through the signal training and say, 'I know the soldiers need to be trained and certified on these tasks,' but that was only because I had so much prior experience on that base and I knew exactly what they would need."[276] To add context to this response, Major Sander is describing is a 2008 to 2009 rotation to Victory Base Complex, Iraq and into a theater that he had experienced before and knew the environment within.[277] In additional he also had a fellow field grade signal officer John who was the Special Troops Battalion, Battalion's S3 at the time.[278] John's experience level was comparable to Major Sander and is stated so within the interview. Major Sander states, "[John] has been in Somalia with me, had been an NCO [non

[275] U.S. Army Human Resources Command, "FY 18 Colonel Army Competitive Category Centralized Selection List -Command and Key Billet," Human Resources Command, 2017, accessed April 20, 2017, https://www.hrc.army.mil/site/protect/assets/directorate/OPMD/FY18_COL_ACC_CSL_PRINCIPALS.pdf.

[276] Jack Sander, Interview with MAJ Jack Sander by Jenna Fike, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2009), 8, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1669.

[277] Ibid., Abstract.

[278] Ibid., 6.

commissioned officer]with me and is someone I'd known for decades."[279] Between these two field grade officers a system of continuity and mutual understanding was created. This system was maintained as the two officers switched positions during the rotation.[280] An important note is the Special Troops Battalion S3 position was an O1A position at the time of the interview took place. That means that any Army officer in the required rank can perform the duties in this position.

Major Glenn Mellor discusses a somewhat similar scenario in that he conducted his training with little oversight as Stryker Brigade Combat Team Company Commander preparing to deploy to Iraq in 2003:

> I had quite a bit of leeway in the fact that I was the only Signal Company in the Brigade. There was Major Fisher who was the Brigade S6. Other than him, I was the senior signal officer in the Brigade. He would give me missions from the Brigade stance, but I had leeway to do what I deemed fit to get my Company trained and ready to go to Iraq.[281]

Major Mellor also described how his teams developed a habitual relationship with the units they supported. By the time the unit deployed his signal teams, "knew how the CAV [cavalry squadron] fought on the field or how the Brigade Support Battalion was going to be arrayed."[282] Perhaps what is the most telling piece of information in regards to training for deployment is what is not included in this interview. Specifically, there is

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[279] Ibid.

[280] Ibid., 7.

[281] Glenn Mellor, Interview with MAJ Glenn Mellor by Laurence Lessard, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2007), 5, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1070.

[282] Ibid., 4.

not a single mention of a senior officer or non-commissioned officer that provided guidance, leadership, or mentorship to his Company before they deployed. In fact, the only mention of a senior officer of any kind is the previously mentioned Brigade S6, Major Fisher, who provided the leeway for Major Mellor to achieve success. Major Mellor says he, "had a great First Sergeant" who was also a "workaholic, just like me."[283] However, there is no mention of the role his non-commissioned officer had within the Company.

From the interview, the researcher can choose one of two available assumptions as to why Major Mellor did not mention any senior leader oversight in the training of his Company. The first assumption is that Major Mellor's previous operational experiences before assuming command adequately prepared him to be a Company Commander who could effectively lead the organization without the oversight as he suggests. Unfortunately, the interview does not discuss Major Mellor's professional experiences, and no additional information could be found to ascertain who professionally developed Major Mellor. The second assumption is that Major Mellor had a leader who was not mentioned and did possess the previous operational experience within signal support to operations to provide the oversight to Major Mellor's training plan. This leader could have been either by the Brigade S6 or his Battalion Commander.

These assumptions have been made because the questions of the interviewer asked where not particular to this research. However, remembering the RAND study in the literature review, "the Battalion Commander is the most important individual

[283] Ibid., 9.

affecting leader development programs for junior officers."[284] The resounding omission of the role the Battalion Commander had in Major Mellor's organization is telling of his deployed leadership development experience.

Now that this essay has examined the training role signal leaders have in modularity it needs to address the most recurring them that encountered during the research, the command relationship between the Brigade Signal Officer (S6) and the Brigade's Signal Company Commander. Major Charles (Chuck) Boles served as a Brigade Signal Officer for 3rd Infantry Division's Aviation Brigade.[285] Major Boles at the time of the interview was an advocate for the modular brigade:

> As the Brigade's principle advisor on communications and computers systems, we could task that unit [the Brigade Signal Company] to do what we thought needed to get done. It's a good system because it couples the Company Commander himself with the support Battalion. . . That gives the Brigade Commander lots of options; he can employ his own system to support his Brigade how he thinks he needs to. Instead of a draconian Division signal (G6) employing a Division's signal assets to support the Division, this is more centralized and more scalable for each Brigade Commander.[286]

Major Boles statement, while clearly for the decentralized nature of signal planning under modularity, discusses the distinct times that the relationship between the Brigade Signal Officer and the Signal Company Commander is critical to the success of

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[284] Peter Schirmer et al., *Leader Development In Army Units: Views From The Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[285] Charles Boles, Interview with MAJ Charles Boles by Angie Slattery, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2010), 4, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1792.

[286] Ibid.

the Brigade. According to Major Boles, his biggest challenge as Brigade Signal Officer, "was tasking authority."[287] Major Boles goes on to say:

> I was the senior signal officer in the Brigade. Each Battalion has a signal officer, and the Signal Company was under the command of the Support Battalion Commander. There was a little animosity about, 'These are my people, my assets.' It all got straightened out in the end with the support of the Brigade executive officers. . . and Colonel Ball [Brigade Commander] was a good Commander, he was wise enough to make all of that work.[288]

Major Boles closes his interview with the Combat Studies Institute by further discussing the critical relationship that the Brigade Signal Officer must have with the Brigade Signal Company and advocates that this relationship must be changed:

> The way that each Brigade can integrate the Signal Company and the S6 section at the Brigade needs to be redone . . . Brigade Commanders need to be aware that there is going to be animosity and problems when it comes to your Signal Company Commander doing what he thinks he needs to do. He's being rated by a Battalion Commander who has no dog in the fight when it comes to Brigade-wide communication assets.[289]

All CTCs have continually noticed this trend. The CTCs discuss trends in the Army's format of subject, observation, discussion, and techniques and procedures. Of these headings, both the subject and techniques and procedures are unclassified. The observation and discussion paragraphs are classified for official use only and cannot be used in this unclassified thesis. The CTC subject is, "[Brigade] S-6 and Signal Company

[287] Ibid., 5.

[288] Ibid.

[289] Ibid., 10.

Commander roles and responsibilities."[290] The technique and procedure portion recommend:

> Ensure that Signal Company Commanders have the opportunity to serve as Commanders. Use the network operations to plan the networks, and use the Brigade S-6 to communicated with the Brigade S-3 to task subordinate units. The Brigade S-6 does not have tasking authority over the Signal Company, but it helps when he informs the Signal Company Commander of missions or taskings that will be published in future orders. This ensures the synchronization of efforts, frees up time for the Commanders to effectively command the Company, and increase the effectiveness of the one-thirds/two-thirds rule.[291]

This relationship within the Brigade Combat Team is continuously brought up because it is personality driven. Major Boles discussed the draconian role the Division Signal Battalion formerly had in the allocation of Division assets to support the Brigade Commander. However, in reality, the draconian role has now shifted from the Division Signal Battalion to the Brigade S6. The Brigade S6 should have always done the planning and coordinating for the Brigade communications plan, but instead of him developing the plan and handing it off to executors, he must work through the Brigade and Battalion staff.

This relationship between signal leaders is unique to the Brigade Combat Team. At the Division level, the respective "Signal Company operates under the authority of the Division G-6 officer."[292] This relationship is possible because the G6 falls under the

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[290] Center for Army Lessons Learned, *CTC Observations: 3rd and 4th Quarters, FY2015* (Fort Leavenworth, KS: Government Printing Office, 2015), 35, accessed January 23, 2017, https://call2.army.mil/docs/doc7387/16-14.pdf#page=1.

[291] Ibid.

[292] Department of the Army, Field Manual 6-02.43, *Signal Soldier's Guide* (Washington, DC: Government Printing Office, 2008), 1-15.

Division Special Troops Battalion and so the G-6 and Signal Company Commander have same Battalion Commander. The formal command structure is in place and allows the critical development of both the signal officers within the Signal Company and the senior staff signal officers to work together. When the formal relationship is not in place, the Signal Company Commander can effectively use his Commander's position to stifle the Brigade Signal Officer's plans. It is clear that working together would be to the benefit of both the Brigade Signal Officer and the Brigade Signal Company Commander. However, the organizational construct has placed the formal requirement to pass orders through the Brigade S3, to the former Special Troops Battalion, now the Brigade Engineer Battalion Commander and their staff to the Signal Company Commander.

The chain of control between the top two signal leaders within the Brigade has created a separation in the leader development. Rightly so, the Brigade Signal Company Commander is being mentored, evaluated, and directly led by his Battalion Commander. When the supporting informal relationships are in place between the Brigade Signal Officer and the Brigade Signal Company Commander the organization should be relatively able to conduct signal operations effectively. However, a breakdown in a relationship between the Brigade S6 and the Brigade S3, BEB Battalion Commander, or the Brigade Signal Company Commander puts the effectiveness of signal operations into peril. The second order effect is if all these relationships are not well formed or developed, the Brigade Signal Officer is unable to effectively mentor or shape the subordinate signal officers within the Brigade.

Within the literature review, it was discussed how the Division or Corps G6 is still responsible for ensuring mentorship of subordinate officers. However, if the Brigade

Signal Officer cannot even effectively provide signal mentorship to the subordinate signal officers, the chances of the next higher headquarters coming informally to mentor and develop officers is extremely limited.

Modular Signal Develops Findings and Analysis

To reflect very briefly from the previous case study, the way in which a signal officer was assigned to their unit prior to modularity was straightforward and simple. The officer would arrive at the installation, and then the Division Signal Battalion Commander would typically conduct an interview. After the interview, the Battalion Commander would then slate the officer were they best felt their talents could serve the Division. In addition to assigning officers, the Division Signal Battalion Commander was also charged to ensure the professional development of all signal soldiers within the Division. Lieutenant Colonel Pugliese frames the problem of conducting mentorship and development without the Division Signal Battalion:

> A challenge in the new modular organization is that we have become more decentralized in our task organization and without the old Signal Battalion the G6 does not have direct control of the numerous signal companies as before. Also gone is the dedicated staff which played a big part in ensuring that the needed mentorship programs were being conducted.[293]

Given the above problem statement, this essays examines how leader development has occurred in the modular force. Operating under the previous assumption that RAND study is correct and the Battalion Commander plays the most important role

[293] John J Pugliese, "Signal officer Mentorship in the Modular Division," *Army Communicator* 34, no. 1 (Winter, 2009), 10, accessed January 11, 2017, http://www.signal.army.mil/ArmyCommunicator/2009/Vol34/No1/2009Vol34No1.pdf.

when it comes to leader development programs the essay will examine company grade officers who state the impact of mentorship on their performance.[294]

In the first example given, Major Day as newly assigned signal officer is fortunate that the Brigade's Support Battalion Commander is also a signal officer. The Support Battalion Commander ensures that Major Day's leader development as the Brigade Signal Officer starts out on the correct path. As an important note, the Brigade support Battalion Commander position military occupational specialty code of 90A which is a multi-functional logistician.[295] Major Eugene Day discusses his operational experience as he prepared to deploy in 2008 to as a part of a Brigade Signal team:

> Our Brigade Support Battalion (BSB) Commander was a signal officer, so he made some calls to Fort Gordon and had a list of people to go see. They sat down with me and they were really helpful. The most important thing I learned was that I didn't need to know all the technical stuff; it was really management and leadership.[296]

Major Day's trip to Fort Gordon emphasizes a core theme in this research. That being successful in the Signal Corps is not always necessarily understanding the technical aspects of the communications network. That as a signal officer, you must also be a

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[294] Peter Schirmer et al., *Leader Development In Army Units: Views From The Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[295] Department of the Army, "Mission Table of Equipment, 308th Support Battalion," Force Management System, 2008, accessed March, 23 2017, https://fmsweb.fms.army.mil/protected/WebTAADS/UIC_Frame.asp?DOC_TYPE=MTOE&Update=GETSQL&MACOM=FC&DOCNO=63345GFC01&CCNUM=1009&DOCST=H&UIC=WCBGAA&EDATE=10/16/2008.

[296] Eugene Day, Interview with MAJ Eugene Day by Angie Slattery, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2010), 4, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/2091.

leader and not simply a technician. Because of Major Day's trip to Fort Gordon, he deployed nearly a month after the main body. Iraq, as previously mentioned, was fairly well developed with communications infrastructure by this time. When Major Day caught up with his unit, he found the primary challenges within his section not technically based, but leadership based. "I remember the first day on the job they were talking about airlifting the HPA, . . . I had no idea what it was . . . what was interesting in that job was that since they'd fired the last guys there was a really big riff inside the section, and half of them hated the other half."[297] Major Day stated getting his soldiers "to take a little pride in what they were doing was the biggest challenge. They had a succession of incompetent signal officers in that Brigade, so that was another challenge."[298]

Analysis of the role that the BSB Commander played in initially setting up Major Day for success in deployment is interesting. From reading the interview, the research makes the assumption that Major Day was the Brigade Signal Officer for this unit. The assumption is made even though Major Day never actually states his position or unit during the interview. Assuming Major Day was the Brigade Signal Officer would mean that Major Day did not work for the BSB Commander. Continuing with this assumption the BSB Commander, as a fellow signal officer, must have felt compelled after watching the previous Brigade Signal Officer get relieved to reach through the Brigade to make

[297] Ibid., 6.

[298] Ibid., 7.

sure another Brigade Signal Officer was not fired. Major Day admits that he was nervous about taking the position because he, "hadn't done any signal work in six years."[299]

Major Day discusses his primary challenges, not in any technical sense, but how important it was to bring the team together because of their "strong personalities."[300] In addition to starting off on the right foot Major Day does mention that he had mentors within the Brigade. He mentions, "both our [Brigade] executive officers were really good. They knew I'd been out of the operational Army for six years."[301] Major Day was also fortunate that his friend, the chief of current operations, Major Ray Celies, was, "an evaluator at JRTC, . . . knew a lot of stuff, . . . [and] was actually a really good mentor."[302] In short, it was not just one person who developed Major Day, but having a senior signal officer within the Brigade organization certainly started him out on the right direction.

Captain Joy Swanke was another signal officer who deployed Joint Base Balad, Iraq as the S6 for the 49th Transportation Battalion. Captain Swanke was also on a well-developed base with a senior signal officer:

> My deployment as a SIGO [Signal officer] really wasn't as tough as a lot of individuals, considering that I deployed with my G6. We were at the same location and also where I was located, at Balad, we had the main Directorate of

[299] Ibid., 3.

[300] Ibid., 7.

[301] Ibid., 9.

[302] Ibid.

> Information Management (DOIM) with us there, so basically all we had to do was maintain.[303]

Both Captain Swanke and Major Day deployed to fairly well-established information and automation infrastructure that was very typical Iraq in the late 2008-2010 period. The infrastructure was developed to the point that the signal officer did not necessarily experience similar challenges previously discussed during the Vietnam era case study. For example, they did not have to ensure that FM could be heard across the entire area of operation. In a relatively mature combat environment, a Brigade Signal team should be able to deploy and effectively install automation systems. This comment is not to disparage any of hard work or personal sacrifices made by the two previous individuals, but it is undeniably different experience then discussed in the previous case study.

Conducting communications within an austere environment and a developed environment is very different and requires a much different degree of planning to be successful. Major Day's statement lends weight to this argument when he states that before his deployment his job, "wasn't real demanding ahead of time."[304] Any officer that has deployed before knows that before the deployment is very busy and very demanding. Planning, training, and preparing to be successful in a forward deployed

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[303] Chris Alexander, Interview with CPT Chris Alexander by MAJ Allen Skinner, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2008), 10, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1290.

[304] Eugene Day, Interview with MAJ Eugene Day by Angie Slattery, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2010), 4, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/2091.

environment takes a concentrated effort. Major Day further discounts the operational impact signal support to operations has by stating that, "he was only asking them to do computer stuff, so it wasn't really demanding."[305]

The case can be effectively made, that towards the end of the operations in Iraq, much of the required networking and information technology infrastructure had been put in place so that the requirement of a signal officer in that environment evolved into solely maintenance operations. The requirement is significantly less challenging than creating or developing new communications solutions as units are dynamically conducting large scale movement and maneuver operations to close with and destroy the enemy. In stability operations, the major headquarters units are very much fixed and able to employ contracted civilian personnel to install, operate, and maintain commercial off the shelf enterprise solutions.

The tactical movements that do occur are primarily concerned with logistics resupply or smaller patrols meant to enhance the local populaces security. In a mature stability operations theater, perhaps the training oversight and development of senior signal officer is diminished and can be effectively filled by any other senior officer that focuses on leadership and organizational management. In short, perhaps the effectiveness of the officer in a sense become branch immaterial.

Major Kevin Garfield is a signal officer that deployed to Afghanistan and Iraq multiple times as a communications officer for both special operations and conventional forces. His fourth deployment to Afghanistan was to support a Center for Army Lessons

[305] Ibid., 7.

Learned mission to, "to evaluate communications and the infrastructure within the Afghanistan."[306] At the time Major Garfield was a small group leader at the Signal Center and also saw it as an opportunity to go forward and relay to his students, "here's what's happening. Here are your standard operating procedures. Here's how the systems are being employed. Here's the challenges so that you understand."[307] Major Garfield started his interview process at the Division level and was able to speak to Brigades and some Battalions.[308] Major Garfield's general impression of communications was one that believed modularity had caused many challenges for the tactical signal communicators:

> A lot of Signal guys were going through modularity, so Signal Battalions had gone away, and now you've got signal companies that are sitting up under a Division, and it's a Major trying to figure out how he's building a network to support a Division headquarters. He's got no S3, no staff to support anything and he falls up under a Brigade support Battalion (BSB) or Brigade Special Troops Battalion (BSTB) and that Commander unless they're signal, has no idea how to employ them.[309]

Major Garfield is describing the impacts felt by the signal force as they adapted to life within modular brigades. He references how the lack of a senior signal leader able to provide oversight is directly affecting the ability of signal officers to perform their mission and therefore, negatively affecting their leader development.

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[306] Kevin Garfield, Interview with MAJ Kevin Garfield by Angie Slattery Hundley, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2012), 6, accessed March 1, 2017, http://cgsc.contentdm.oclc.org /cdm/ref/collection/p4013coll13/id/2930.

[307] Ibid.

[308] Ibid.

[309] Ibid., 8.

Major Garfield went on to discuss how the uninformed believe that conducting signal operations can be perceived as easy and how this perception may also be causing the problems observed at the Brigade and Battalion level:

> With signal, a lot of people say, 'Oh signal is easy. You just plug it in, turn it on and there you go. Have at it.' Well, Signal, especially today has become very complex because of satellite-based [communications], line of sight [communications and the] wide range of frequencies . . . with any technology you don't understand it, it [sic] can get away from you quickly. That was a lot of the challenges that I think we saw early with communications, which is why I think a lot of Signal officers struggled, especially at the Brigade level. [310]

In other words, signal support to operations can have the perception of being so easy that leader development is not needed. Why would a signal officer need leader development when all that is needed to do is plug it in? What Major Day references next is the complexities that are involved in providing signal support to operations. To reduce signal support to operations simply plugging equipment in and turning it on is the equivalent of comparing combined arms maneuver to deploying to a theater and engaging the enemy. While both of these statements provide a description of an action that occurs, they both fail to appreciate or understand the complexities associated with their specific terms. No Army officer would claim that combined arms maneuver is best conducted without the leader development provided by a senior maneuver officer, so why should an equally complex requirement such as signal support be any different?

When comparing the three interviews, it begins to become apparent how communications challenges were perceived. In Major Garfield's interview responses, he heavily focused on maintaining tactical communications within Afghanistan. Afghanistan was a theater that because of challenges created by both its terrain and lack of supporting

[310] Ibid., 9.

infrastructure never achieved the same level of information service robustness achieved in Iraq. Because of these challenges some individuals who had previously deployed to Iraq before deploying Afghanistan may have expected the same level of plug it in and turn it on mentality. In truth, Iraq was the warm up and Afghanistan was a much more challenging tactical communication problem. Both theaters were challenging in their own right, but the more decentralized units are, the less access they have to senior signal leaders who know and understand the challenges faced by the junior signal officer. Without this senior leader oversight, it is still up to the signal officer guide his development and get the message through.

Modular Signal Achieves Findings and Analysis

In 2008 the RAND Corporation conducted a study that would be eventually published in 2012. This study discussed the overall effectiveness of the Army's communication networks. In this effort, the RAND Corporation conducted several polls and interviews to determine who had the best access and reach capabilities when it came to Army communications. The results of the study found that, "the data on the quality of network and network devices illustrate that O-6 and Signal [branch]generally have the best reach and capabilities and that O-3 and combat branches have the worst reach and capabilities." [311] While the results of the study may formally confirm what many in the Army have always known, the signal officer is still primarily evaluated on the

[311] Timothy M Bonds, et al., *Army Network-Enabled Operations: Expectations, Performance, and Opportunities for Future Improvements* (Santa Monica, CA: RAND Corporation, 2012), 160, accessed February 15, 2017, http://www.rand.org/pubs /monographs/MG788.html.

effectiveness of ensuring uninterrupted tactical communications. The combat arms branches are, by their very nature, more difficult to plan for because of consistent combat maneuver and difficulty of maintaining line of sight coverage on the battlefield.

The first example to be examined are the well documented difficulties using FM communications inside of Baghdad for operations. During an operational leadership experiences interview, Captain Keith Brian Lambert discusses his problem using FM using communications while conducting clearing operations in Baghdad:

> That's when the comms [communications] were really, really, bad because you're going out into areas with no retrans[mission] sites and you're clearing further south, further east or further west in less built up area. You always had to pay attention to make sure your comms were working before you left.[312]

Captain Chris Alexander echoes Captain Lambert's sentiments about to reliability of FM communications inside of Baghdad.

> So we moved down to Baghdad, and the comms were terrible, mainly just because it was a much more sprawled area. Baghdad is just huge. Mosul's a pretty good-sized town, but Baghdad is just sprawled all over the place. They couldn't have retrans[mission sites] because there's nowhere to really safely put it because everywhere was hot, especially when we got there. So comms really suffered, and the only way to talk back to base at all was just to have the Company Commander and whatever crazy rig he would have in his Stryker to talk back.[313]

Major Glen Mellor also stated they had a hard time initially getting the FM coverage they needed in Samarra, north Baghdad Iraq.

> When we were first in Samarra, we had a hell of a time. It was a lot smaller footprint, but it was all flat. It wasn't like you could put a retrans[mission site] up somewhere high and have the signal. We had a lot tougher time communicating in

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[312] Chris Alexander, Interview with CPT Chris Alexander by MAJ Allen Skinner, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2008), 4, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1290.

[313] Ibid., 7.

> that smaller range than when we got up to Mosul where there were significant high hilltops that you could put retrans[mission sites] on. . . I was always worried about the security footprint and having retrans out there by themselves. That was addressed, though, and they put Strykers up with them.[314]

This example is starkly different than the FM communications capabilities discussed from Vietnam portion of the research. During Vietnam, FM communications had a great deal of emphasis placed on it to ensure that the soldiers were able to have the communications they needed. A great deal of innovation was done in the Vietnam War to mitigate the effects of terrain through the use of aerial retransmission either by fixed or rotary wing aircraft, the creation of air mobile retransmission shelters (MRC 34½), or the erection of communications towers. The level of coordination and sharing of information that led to the development of the air mobile retransmission shelters is noticeably lacking multiple units have a similar problem talking on FM while in Iraq.

The lack of coordination was also apparent when the 82nd Airborne Division deployed to 2nd Infantry Division's area of operations. 2nd Infantry Division was equipped with the line of site based Force XXI Battle Command Brigade and Below-Enhanced Position Location Reporting System (FBCB2-EPLRS), and the 82 Airborne Division was equipped the beyond line sight, or satellite, variant of FBCB2 known as Blue Force Tracker (FBCB2-BFT). "FBCB2-BFT is not encrypted or accredited to process secret information because of the commercial satellite link and therefore . . . not

[314] Glenn Mellor, Interview with MAJ Glenn Mellor by Laurence Lessard, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2007), 5, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1070.

interoperable" with the EPLRS variant.[315] In other words, two systems that looked identical and had the same core purpose of providing the situational location of other friendly elements by creating a common operating picture could literally not virtually see or talk to each other. This inability to see each other was due to the conflicting technology that required one system to encrypt its transmissions while the other could only send transmissions unencrypted. Because of this, each system only received their half of the common operating picture. Captain Chris Alexander discusses how the group worked around this issue:

> "This is where we ran into the problem when working with the 82nd [Airborne Division] of the [FBCB2]-Blue Force Tracker[BFT] versus FBCB2-[EPLRS] because that's all that the 82nd had was BFT, all we had was FBCB2[-EPLRS] and they couldn't talk to each other. They [82 Airborne Division] did have some spare rigs lying around and they installed BFTs into each Platoon leader's and the Company Commander's vehicles. That was more for them to be able to track us. We didn't really have room to set up anything in the Strykers."[316]

The example of two incompatible systems, meant to provide the same service or purpose provides an excellent example of some of the problems encountered due to modularization. While communications equipment was fielded at the Division level, task forces may be brought together that didn't have an interoperable set of equipment. However, the leaders on the ground proved to be resourceful and work around the

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[315] James L. Conaster and Vincent E. Grizio. "Force XXI Battle Command Brigade and Below-Blue Force Tracking (FBCB2-BFT). A Case Study in the Accelerated Acquisition of a Digital Command and Control System during Operations Enduring Freedom and Iraqi Freedom" (master's thesis, Naval Postgraduate School, 2005), 40, accessed March 23, 2017, http://www.dtic.mil/dtic/tr/fulltext/u2/a443273.pdf.

[316] Chris Alexander, Interview with CPT Chris Alexander by MAJ Allen Skinner, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2008), 7, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1290.

problems they encountered. It is unknown if the senior communicators serving in these Divisions had knowledge that these two systems were not interoperable before the deployment. However, since a workaround solution was found afterward, the research assumes that the Division and Corps communications staff were not aware of incompatibility or simply did not have the time available to address this issue due to competing operational requirements.

Now that this essay has addressed tactical communications shortfalls in an operational environment, it can now turn its focus on communications shortfalls at the Army's CTCs. A signal officer who served as an observer and controller at NTC offered some critical advice to Brigade and below signal officers. The first advice was, "arriving at NTC is not the time for an organization to start getting acquainted with tactical satellite and high frequency radios, digital systems in the command post, retransmission sites, and how to establish upper tactical internet."[317] The article goes on to say, "organizations continue to not focus on mission command as a line effort in their train-up plan, which ultimately has affected their performance at the National Training Center."[318]

This advice seems to be common sense. Most units are very focused as they prepare for an NTC rotation. Company, Battalion, and Brigade Commanders center the annual training plan for achieving and doing well at NTC. If mission command is not a line of effort in the training plan, then how can they expect to do well? Mission command

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[317] Army Signal Center "A Signal Officer Perspective at the National Training Center," *Army Communicator* 40, no. 4 (Winter, 2015), 7, accessed January 11, 2017, http://www.signal.army.mil/ArmyCommunicator/2015/Vol40/No4/Winter_2015_Online.pdf.

[318] Ibid., 8.

as a warfighting function is described doctrinally as, “the related tasks and systems that develop and integrate those activities enabling a Commander to balance the art of command and the science of control in order to integrate the other warfighting functions.”[319] Given the context of the author's comments, the research assumes they are referring to one of the additional tasks of mission command, “install, operate and maintain the network.”[320] As a note, when an Army signal officer talks about mission command he is not usually talking about the primary command and staff tasks and is more concerned about enabling them by performing this additional task. Operating under this assumption, the author states that there is not a line of effort for the core mission of the Brigade Signal Company.[321]

If the training plan is not being conducted to ensure a unit arrives at NTC and is ready to conduct operations a Commander or Commanders has not done their due diligence. It is the responsibility, and the due diligence of the Brigade Signal Company Commander and BEB Battalion Commander is to ensure the signal companies training plan can meet the operational challenges. Within the Division Signal Battalion, the planning and training process described in the literature review could have potentially mitigated this risk.

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[319] Department of the Army, Field Manual 6-0, *Commander and Staff Organization and Operations* (Washington, D.C: Government Printing Office, 2016), vii.

[320] Department of the Army, Army Doctrine Reference Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, 2014), 1-5.

[321] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-3.

How has the Lack of Signal Leader Development
Impacted the Tactical Signal Force?

Analysis of the research from the case study concludes that the signal officer's leader development has been negatively impacted in four areas. These areas, which the Army terms doctrinally as gaps, will be discussed in this essay. The first gap is a lack of senior signal officer knowledge and experience that can lead to the success of company grade signal officers. The second gap is command relationships that inhibit the most senior signal leader in the Brigade, the Brigade S6, from implementing a formal leader development program. The next gap is the ability of signal officers to provide communications support to operations. The final gap is the lack of training that adequately prepares signal officers to provide the communications support to operations. The research indicates that all four of these gaps have been created by a lack of signal officer leader development within the modular brigade.

The research has identified the first gap as a lack of senior signal officer knowledge and experience that can guide the leader development of the signal officers that support tactical units. Without the operational experiences of the senior signal officer, the company grade signal officers do their best with their operational experiences and the leader development that is available to them. In the case of some signal officers, this experience appears to be enough to be successful. For others, this experience appears not to be enough. The research comes to this conclusion from the remarks of CTC observers and controllers in both the literature review and the research.

Secondly, the command relationships further restrict the development of the signal officer. When the Brigade Signal Officer wants to conduct leader development of the signal officers within the Brigade, he must work through the four to five Battalion

staffs to formally conduct leader development. If the Brigade S6 needs to formally collaborate in the planning process with the Brigade Signal Company Commander, he must send a tasking order to the Brigade S3, then to the BEB S3, and finally down to the Signal Company. This tasking order can be interrupted if the Brigade S6 does not have a good relationship with any of the officers above and also the BEB Executive Officer or Battalion Commander. Signal leader development must be done primarily through the development of personal relationships and the use of the informal networks. The use of the informal networks is done with all the other requirements of leading a Brigade staff section.

The third gap appears in the ability of signal officers to plan and then employ combat communications systems effectively. The two discussed systems were FBCB2 and FM radio communications. Something that would have been unacceptable in Vietnam was deemed to be acceptable in the establishment of the FM network during operations in Iraq. During Vietnam, communicators within the Division Signal Battalion ensured that the FM coverage was adequate. If coverage was inadequate, 200-foot antennas would be erected, or a creative solution such as aerial retransmission platform was implemented. In the interviews used for this case study, it seems to be accepted that FM coverage would be poor because the terrain did not offer a suitable retransmission site.

Finally, perhaps is the most telling, is the observation from NTC in regards to signal units arriving without testing their equipment or understanding its operation. While there is no doubt that the Signal Company Commander is to blame as well as the Brigade S6, the Battalion Commander who rates the Signal Company Commander must also face

some accountability. How can any unit arrive at a CTC essentially unprepared to conduct their mission? Referencing the research conducted in the literature review, it seems that BEB is primarily concerned with the conduct of engineer support operations to the Brigade. The Brigade Signal Company is thought of as a secondary concern, or they attempt to give them to the Brigade S-6.

In summary, leader development is occurring with signal officers within the modular force structure. However, the leader development that is occurring does not create a signal force that learns from others operational experiences. Leader development is only being applied to the signal officer in terms of generalities. Removal of the supporting signal staff and senior leader has created a modular signal force in which only by the officer's own volition can he truly be successful. There is not the oversight there once was, and so these leaders are shaped by their operational experiences and failures. They are not led or guided by someone who can help shape the success of these experiences. Signal officers are simply expected to plug it in and make it work.

Division Signal Battalion (Provisional) Introduction

The purpose of this introductory essay is to inform the reader of ends, ways, and means of the Divisional Signal Battalion (Provisional). The ends of the Division Signal Battalion will inform the reader the reason why the Division Signal Battalion (Provisional) was reactivated. The ways inform the reader of the types of the command authorities given to the Battalion Commander of the Division Signal Battalion. The means describes the companies and personnel that constitute this Battalion. Through this understanding, the reader will be able to have some context of the makeup and responsibilities within the Division Signal Battalion as a pilot program. The essay will

conclude with a brief discussion of the primary source data for this case study as well as an explanation of why this source data was used.

The Division Signal Battalion was created as part of Headquarters Department of the Army order to evaluate three proofs with the desired end state of, "[improving] tactical signal force capability to provide uninterrupted mission command at the Division level and below."[322] 3rd Infantry Division was designated to implement the Division Signal Battalion proof of concept to determine how that particular force structure would improve the capability to provide uninterrupted mission command.

To provide a way to command and control this formation the Battalion would receive administrative control functions of the signal companies. In additional to this administrative control the 3rd Infantry Division Commander also gave the Division Signal Battalion Commander and Command Sergeant Major the additional responsibilities to approve all companies training schedules, assign all signal personnel in the Division, and have tasking authority over the soldiers and communications platforms assigned within to the Battalion.[323] This gave the battalion leadership the ability to identify and task signal support requirements for Division and Brigade level exercises. This level of responsibility is more similar to that of operational control than administrative control. The operational level of control allows the Battalion command team a much greater amount of leverage in ensuring the training, readiness, and oversight of the subordinate signal companies.

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[322] Department of the Army, "Information Paper: Tactical Signal Pilot and the Division Signal Battalion" (Fort Stewart, GA: Government Printing Office, 2017).

[323] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

To support the Division Signal Battalion, pilot the following means or resources were provided. The first step was to activate Headquarters, 123rd Division Signal Battalion (Provisional) and its Headquarters and Headquarters Company. This step was completed on August 1, 2016.[324] The second step was to reorganize two Signal Companies from modular brigades and the Division's Signal Company under the Signal Battalion, giving the Battalion three operational companies.[325] These companies along with other augmented personnel from throughout the Division brought the Battalion to an operational strength of 244 soldiers. [326] With this benchmark achieved, the Battalion and reached its full operating capacity on December 2, 2016.[327]

Having discussed the ends, ways, and means of the 123rd Division Signal (Provisional) the essay will now discuss the primary source material for this case study and why this material was chosen. The primary source material for this case study is from a semi-structured interview the researcher conducted the current Battalion Commander of the 123rd Division Signal Battalion (Provisional). The researcher chose to interview only the Battalion Commander because of findings from the literature interview that pointed to the Battalion Commander as being the most influential person in the leadership

[324] Department of the Army, "Information Paper: Tactical Signal Pilot and the Division Signal Battalion" (Fort Stewart, GA: Government Printing Office, 2017).

[325] Ibid.

[326] Ibid.

[327] Ibid.

development of company grade officers.[328] The Battalion Commander also had experience as Division G6 officer before being selected to the command the Signal Battalion. Therefore, he is an excellent source to directly compare and contrast the effectiveness of leadership development from both the Division G6 perspective as well as a Battalion Commander.[329]

This essay has provided an introduction to the ends, ways, and means of the Division Signal Battalion (Provisional). The essay secondly provided a brief explanation of the selection primary source material for this case study as well as the reason for selecting only one individual to interview as the primary data source of this material. Now that this introductory essay has provided the context of this case study, the research will now discuss the findings and analysis from the responses of the semi-structured interview. The responses, as in the two previous case studies, have been coded to be organized into the theoretical framework to answer the final, secondary research question: "How does the 3rd Infantry Division's Signal Battalion (Provisional) propose to improve signal leader development?"

Division Signal Battalion (Provisional) Leads Findings and Analysis

With the creation of the Division Signal Battalion pilot program, the Battalion Commander was assigned three Signal Companies and given administrative control of

[328] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[329] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

those companies.[330] The Division Commanding General increased this authority to more of an operational control by adding the authorities to approve training schedules, assign all signal personnel within the Division, and have tasking authority of the now subordinate signal companies.[331] This essay will discuss the first two of these command authorities. The first authority will examine how the training management has impacted the leader development of signal officers within the Division Signal Battalion. This discussion will include the observations of Colonel's Ortiz's time as both a Division G6 and Division Signal Battalion Commander as well as his impressions on the level of signal training currently being conducted within the BEBs. The second portion of this essay will review how Colonel Ortiz's leadership can build positive relationships that created and enabled Commander to Commander relationships. It is because of these relationships that he has been able to conduct the talent management of signal officers within the Division.

First, the essay needs to define the role of the Division Signal Battalion Commander that supports modular brigades. Colonel Ortiz describes his role and relationship with training his subordinate signal companies as, "wrap[ping] my hands around the signal companies and [training] them."[332] He goes on to describe his observed training proficiency with signal companies under the Brigade Engineer Battalion as, "BEBs just doesn't know signal, some just don't care and have invested zero time and

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[330] Department of the Army, "Information Paper: Tactical Signal Pilot and the Division Signal Battalion" (Fort Stewart, GA: Government Printing Office, 2017).

[331] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[332] Ibid.

effort. Some try to figure it out and make it work."[333] The previous case study, as well as the literature, discussed how the BEB's lack of understanding of signal operations and training requirements did not contribute to the needed signal leader development. The Signal Company is also disadvantaged because they primarily only support BEB or the Brigade.[334] This is significant because lessons learned from any operational experiences are not shared with the rest of the force. This creates a situation in which subsequent Signal Company Commanders must continually learn the hard lessons over and over again.

By contrast, within Division Signal Battalion, the Commander sets the training priorities and training schedules. If, "the Battalion needs to conduct a SWITCHEX [communications rehearsal] I [Colonel Ortiz] make sure we conduct a SWITCHEX."[335] This means that a Signal Battalion Commander recognizes an area of training that needs to be emphasized and has the operational flexibility to add it to the training calendar and resource it appropriately. Because he is the Commander and not a primary staff officer he directs his organization and deconflicts this training event internally. A primary staff officer within a Division or Brigade will have a much greater degree of difficulty accomplishing a similar exercise because he is deconfliting not only with the Brigade staff but all the Brigade's subordinate Battalions.

[333] Ibid.

[334] Ibid.

[335] Ibid.

The combined focus of effective signal specific training and exercise support creates an environment in which, "multiple signal companies are conducting multiple operations and learning from each other."[336] A training environment in which the signal training is given priority is effectively resourced and previously learned lessons are applied across the Battalion. The ability to share lessons learned is critical to the leader development of the signal officers as they share their operational experiences.

A Signal Company training independently from other Signal Companies may have the best practices within the Division. However, having the best practices will not provide the rest of the force any benefit if they are not shared. Other signal officers may also have the exact opposite problem, in that their training is suffering. Because they have no one else to compare themselves to ignorance is bliss. Because of this ignorance, and dependent upon the Brigade's command climate, a sub-standard method of operating may be accepted. If the sub-standard method is not accepted, either the signal officer must successfully seek out the guidance he needs to be successful, or if not, he may be relieved. Subsequently, this demonstrated performance will contribute to the overall evaluation of this officer and his potential for future promotion.

Now that the essay has discussed the training management portion of the command authority, it will now examine how the Division Signal Battalion (Provisional) can positively affect the talent management of signal officers within the Division. Colonel Ortiz has stated that "not a single signal officer comes or leaves the Division

[336] Ibid.

without me knowing it."[337] In accordance with the manning guidance that Division Signal Battalion Commander receives from the Division Chief of Staff, Colonel Ortiz is responsible for assigning signal officers within the Division.[338] Colonel Ortiz states that success with this responsibility begins with establishing a functioning relationship with the Division's, Brigade Commanders. As Colonel Ortiz stated, "when you establish a positive relationship it establishes a precedent and credibility."[339] It establishes a precedent in the regards that a Battalion Commander has the authority and ability establish a Commander to Commander relationship with that Brigade. While the Brigade's Battalion Commanders can voice concerns or specific issues, the Division Signal Battalion Commander only discusses signal officer manning with Brigade Commanders. As a note, the Division Signal Battalion Command Sergeant Major has the same relationship with the Brigade Senior Enlisted Leaders.[340] This relationship also establishes credibility because of the Brigade Commander's understanding that the Division Signal Battalion will send them the best fit for the Brigade requirements. This credibility has translated into Brigade Commanders who still have the Signal Companies organized within the Brigade are asking Colonel Ortiz to conduct interviews and select the best signal officer for the job on their behalf.[341]

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[337] Ibid.

[338] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[339] Ibid.

[340] Ibid.

[341] Ibid.

When the researcher asked Colonel Ortiz to compare his time as Division G6 and the assignment of Signal officers to being Commander he stated, "the G6 doesn't have the time, authority, or ability to sit at the table with Brigade or Battalion Commanders."[342] The Division G6 does not have the time to slate the officers simply because of the requirements being a primary Division staff officer consumes all of G6's available time. Even though the G6 is doctrinally given responsibility to advise in the conduct talent management of signal officers, the G6 does not have a Commander to Commander relationship.[343] The command authority and the relationships developed because of this authority are what empower a senior signal leader to be effective in the talent management for signal officers throughout the Division. With both these explanations in mind, this is why the Division G6 lacks the third point Colonel Osvaldo brings up in his interview, the ability. Without time and authority, the Division G6 does not have any ability to affect the talent management of signal officers within the Division.

In summary, this essay has discussed how the Division Signal Battalion (Provisional) is affecting the leader development of signal officers by first creating the training environment that most enables other signal officers to not only learn from each other but also allocates the time and resources to conduct signal specific training effectively. The second section of this essay discussed how the establishment of relationships with the Brigade Commanders allowed the effective use of talent

[342] Ibid.

[343] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-4.

management to be conducted within the Division. In the closing statement of his interview, Colonel Ortiz stated, "the DSB will be successful at the Brigade level. We must establish trust at the Brigade Commander level; this is where we win!"[344] This epitomizes the mindset of a senior signal leader. Ensuring the signal support to the modular brigades, but also making the signal force better through training and placing people where they will be the most effective.

Division Signal Battalion (Provisional) Develops Findings and Analysis

This essay will discuss two areas within the Develops competency that the Division Signal Battalion is succeeding. The first area is the Battalion wide professional development program of the signal officers. The second is the development of the Brigade S6s and Brigade staff during the mission analysis step of the military decision making process.

Colonel Ortiz stresses that within his leadership development program, "peer to peer relationships cannot be emphasized, enough."[345] He described the scene when the Battalion first formed, and he brought his signal officers together for the first time. "I brought together all my Lieutenants and Captains and asked who had seen each other before outside of OBC [officer basic course] or Captains Career Course, and no one raised their hand."[346] This result is extremely similar to the training issues discussed within the previous essay. The company grade signal officers are fragmented within their

[344] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[345] Ibid.

[346] Ibid.

respective Brigade and Battalion formations. It is because of this fragmentation that officers rarely if ever encounter each other in operational setting and so they rarely are brought together to focus on signal specific leader development.

The Division G6 has the responsibility doctrinally to provide the leader development with the modular force structure.[347] Asking Colonel Ortiz to compare the results from his efforts to the professional development of signal officers from when he was a Division G6 to that of being a Battalion Commander, he stated, "when I was a G6, I was only able to get two Brigade Signal Company Commanders together at the same time."[348] As a result, "Company Commanders never get to know another Signal Company Commander within their Division."[349] This quote serves to reinforce the difficulty of getting company grade signal officers together. Even though it is doctrinally the responsibility to ensure the development of subordinate signal officers, the authorities granted to the Division G-6 do not effectively enable this effort.

The ability to bring company grade signal officers together more effectively to be developed is a direct result of the Division Signal officer having command authority. If the Division G6 were to have a mentoring or counseling session, it would have to be published either formally or informally. Formally, the Division G6 could write an order through the Division G3 to be published through the Brigades for signal officer attendance. Informally, an email or similar correspondence would be sent out

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[347] Department of the Army, Field Manual 6-02.43, *Signal Soldier's Guide* (Washington, DC: Government Printing Office, 2008), 1-11.

[348] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[349] Ibid.

coordinating a leader development session. It is fair to say that operational requirements of the subordinate Brigades and Battalions have traditionally, and sadly, outweighed an opportunity to participate in a Division level leadership development session.

Colonel Ortiz discusses the effectiveness of the leadership development program by highlighting the feedback from his Lieutenants who served in the Signal Companies in the modular brigade before they were reorganized to under the Division Signal Battalion (Provisional) pilot program. The Lieutenants have told Colonel Ortiz that the program is, "fantastic because they realize that the problems they're having are no just unique to their organization."[350] Both the Lieutenants and Captains also commented to Colonel Ortiz that before these professional development sessions, "no one ever told me the career benchmarks or if I was on [the right] course." [351] The three examples of sharing problems and solutions, career mentorship and guidance, and the having insight of senior signal officer are three direct examples of how the company grade signal officers were not sufficiently developed as leaders within the modular force. Having a senior signal officer who has had similar experiences or even made the same mistakes serves these junior officers better since they can learn directly from him.

Having reviewed the leadership development program with Division Signal Battalion (Provisional), the essay will now discuss how this Battalion is developing the Brigade Signal Officers and Brigade staff in their mission analysis and signal planning to support operations. When requesting signal support to operations, the Brigades cannot

[350] Ibid.

[351] Ibid.

simply say, “I want my Signal Company.” The Divisional Signal Battalion uses the signal planning framework discussed in the literature review of first identifying the communications requirements.[352] Primarily the Brigade S6s and S3s are responsible for identifying these requirements. The Brigade S6 then takes these requirements and develops his signal plan. In Colonel Ortiz’s view, this method of signal planning forces the Brigade S6s to conduct mission analysis when requesting signal support properly.[353] Colonel Ortiz admits that getting the units to think in terms of requirements and not communications platforms was difficult. For example, “not every mission needs a CPN [Command Post Node]; we provided a SNAP [Secure Internet Routing Protocol and Non-secure Internet Routing Protocol Access Point] VSAT [very small aperture terminal] because the requirements were for ten computers and five phones.”[354] The ability to efficiently employ signal systems and apply the principle of war of economy of force even when providing signal support pays dividends across the Division.[355] A CPN has greater requirements in manning equipment than a SNAP VSAT. This allows the CPN resources to be conserved to support other tactical communications support requirements across the Division.

[352] Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Government Printing Office, 1999), 4-5.

[353] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[354] Ibid.

[355] U.S. Joint Chiefs of Staff, Joint Publication 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: U.S. Joint Chiefs of Staff, March 25, 2013), I-3.

Because of the communications assets are managed economically they can be effectively weighted to support the main Division effort. Colonel Ortiz highlighted a particular case in which the Brigade S6 conducted his mission analysis, discussed his plan with Division Signal Battalion planners and, "got more than the standard Brigade Signal Company because of their mission's requirements."[356] To the proponents of keeping a Signal Company in the modular force, this may represent the "draconian" signal support systems referenced by Major Boles.[357] However, the research indicates that if the proper planning is done within mission analysis, a Brigade Commander's ability to conduct mission command is enhanced as instead of reduced.

The final point concerning the leader development of the Brigade S6 is feedback the Brigade S6 receives when he submits the communication requirements to the Division Signal Battalion. Within the Division Signal Battalion, there are three signal warrant officers as well the Battalion S3. These officers serve as a second set of eyes for the communications plan in addition to ensuring the identified communication requirements are supportable.[358] This ability to have a formal review of the plan is critical to signal officers who may be beginning their Brigade S6 time as well as during rotations at the CTCs. The Division Signal Battalion supported 1st Brigade, 3rd Infantry Division in April of 2017 and Colonel Ortiz stated that this relationship, "helped the Brigade S6

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[356] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[357] Charles Boles, Interview with MAJ Charles Boles by Angie Slattery, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2010), 4, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1792.

[358] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

get after it."[359] In other words, this relationship allowed the Brigade S6 to have a successful rotation while specifically at NTC. This is a significant difference in the performance signal units and staff that come from the CTC observers and controllers' remarks highlighted throughout this research.

In summary, this essay has reviewed the way in which the 123rd Divisional Signal Battalion (Provisional) can shape and directly develop the signal officers not only at the Company and Battalion level but also at the Brigade. The essay first discussed the leadership development program put in place by the Division Signal Battalion that provides the sharing of information, career development guidance, and the insights of a senior signal officer to company grade officers within the Signal Battalion. The essay then discussed the findings and analysis of how Brigade staffs, and in particular, Brigade S6s are being developed as leaders within by Division Signal Battalions requirement for a complete mission analysis to include communications planning to provide support. Now that the case study has reviewed the Develops competency, it will next discuss how the Division Signal Battalion (Provisional) is getting results by evaluating their Achievements.

Division Signal Battalion (Provisional) Achieves Findings and Analysis

The final essay in this case study will discuss the achievements of the Division Signal Battalion pilot program. This essay begins by discussing the initial signal support statistics and explaining their significance before reviewing what the Battalion Commander identified as the Battalion's greatest success of their signal leader

[359] Ibid.

development program. The essay concludes with a discussion of an area of improvement within not only the Division Signal Battalion but the entire Signal Corps.

In a white paper sent to the Commanding General of the 3rd Infantry Division, the 123rd Division Signal Battalion lists it accomplishments within the first 120 days of reaching full operating capacity as the following:

> The DSB supported 24 exercise or training events, . . .conducted nine Signal/Mission [sic] Command MTTs [Mobile Training Teams] in Fort Stewart [which] trained 213 Soldiers, . . executed over 1,600 hours of training, . . . [and] deployed Signal Support Contact Teams with 1[st] ABCT [Armored Brigade Combat Team] to their NTC 17-05 rotation and with 3[rd] SB [Sustainment Brigade] to JBLM [Joint Base Lewis-McChord] in support of WFX [Warfighter Exercise] 17-04.[360]

While this list of accomplishments is impressive, the core point of this list which Colonel Ortiz highlighted that without the Division Signal Battalion providing oversight and coordinating signal support across the Division, the same level of support would have been extremely difficult if not impossible.[361]

Colonel Ortiz provided the specific example of the signal support received by 3rd Infantry Division's, Sustainment Brigade. The Sustainment Brigade's Signal Company was one of the companies reorganized under the DSB to support the signal pilot program.[362] Because of this, the Brigade prefers to have that same habitual support relationship in place, but in this instance, the Brigade's operational tempo and exercise

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[360] Department of the Army, "Information Paper: Tactical Signal Pilot and the Division Signal Battalion" (Fort Stewart, GA: Government Printing Office, 2017).

[361] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[362] Department of the Army, "Information Paper: Tactical Signal Pilot and the Division Signal Battalion" (Fort Stewart, GA: Government Printing Office, 2017).

requirements did not allow the Signal Company sufficient time to reset and reconfigure their equipment. Instead of stressing the soldiers and equipment the Sustainment Brigade was provided support from the Signal Company originally from 2nd Brigade, 3rd Infantry Division.[363]

Because of this flexibility, the Brigade most likely received a higher quality of signal support. This higher level of support was enabled because planning could be conducted independently and the communications equipment could be configured and properly tested to support both training events. When compared to how a single Signal Company would have supported these two operations within a modular brigade the advantage becomes clear. In the modular brigade, the Signal Company soldiers and equipment would have reset the equipment while possibly simultaneously loading and testing the new configurations. While this practice within the Signal Corps is not unheard of, it is not preferred. The Company, Battalion, and Brigade Commander all assume a larger degree of risk of success because of the stress in places on both the soldiers and the equipment. The Division Signal Battalion was essentially able to completely mitigate this risk through the effective use of their signal companies.

Now that the essay has reviewed the significance of support provided by the Division Signal Battalion, it will discuss what the Commander of the Battalion identified as his greatest achievement. According to Colonel Ortiz, the biggest achievement of the 123rd Divisional Signal Battalion is, “the implementation of a signal leader development

[363] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

program."[364] As the benefits of the leadership development program have been discussed previously in the Develops portion of the case study, this portion of the case study will not revisit them. What is necessary to point out is that the biggest achievement of this Battalion was not the signal support provided to the Brigades, the Commander to Commander relationships built, or even the ability to effectively provide Signal officer talent management across the Division. All these things are important, but the core all these achievements is a strong signal leadership development program.

When the researcher asked Colonel Ortiz about what could be improved within the Division Signal Battalion, his response was to continue to address communications issues within the lower tactical internet.[365] Signal officers sometimes use the framework of the former doctrinally accepted terms upper and lower tactical internet when conducting signal planning. While these terms were doctrinally accepted, they have been replaced by three tiers of the tactical internet, the upper, mid, and lower.[366] The tactical internet itself is defined as, networks to connect deployed users to an area processing center and other DISN [Defense Information Systems Agency] services, regardless of their location."[367] In other words, the tactical internet is the internal and external communications systems that enable access to defense information systems in the austere,

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[364] Ibid.

[365] Ibid.

[366] Department of the Army, Army Training Publication 6-02.60, *Techniques for Warfighter Information Network Tactical* (Washington, DC: Government Printing Office, 2016), 1-5.

[367] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 3-3.

expeditionary, and remote areas in which Army units commonly find themselves operating within.

The lower tactical internet, or lower tier, is doctrinally described as the network which, "supports Company and below formations down to the team leader."[368] Since these units usually conduct tactical movements and maneuvers the communications equipment providing their services must be light and mobile. Because of this, their equipment, "consists primarily of secret radio networks at Platoons and Companies."[369]. The mid-tier tactical internet is the communications equipment at the Company and Battalion levels and serves as, "the gateway capability between the upper and lower tiers."[370] The upper tactical internet is described as the portion of the tactical internet that, "connects the mid and lower tier to the DODIN [Department of Defense Information Network]" and supports the Brigade and above level.[371] It is because of the upper tier of the tactical internet that services such of voice, video, and data can connect the Brigade and its subordinate organizations to the world wide web and therefore, anywhere in the world. The mid and lower tiers primarily facilitate the internal communications of the Brigade.

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[368] Department of the Army, Army Training Publication 6-02.60, *Techniques for Warfighter Information Network Tactical* (Washington, DC: Government Printing Office, 20160, 1-6.

[369] Ibid.

[370] Ibid.

[371] Ibid., 1-5.

The force structure of the Division Signal Battalion primarily contains communications platforms that establish upper tier of the tactical internet as well some elements from the mid-tier.[372] In theory, an additional dividend from establishing the Division Signal Battalion would be that the Brigade S6 would be able to focus more on establishing and training on the lower and mid tiers of the tactical internet. This would make sense because much of the upper tier assets are now at the Division Signal Battalion. As this research has shown, the BCTs can have difficulty successfully integrating the lower and mid-tier tactical internet into operations. Even with the establishment of the Division Signal Battalion Colonel Ortiz had yet to observe a renewed energy or focus in planning for the low tier of the communications by the Brigades.[373]

Colonel Ortiz stated a possible cause of this tendency to focus too much on the upper tier, stating, "over the last five to 10 years we've overemphasized [professional] certifications such as Security + [and] Net[work] + when a Brigade Commander doesn't need that. The Brigade Commander wants to know, can you plan my network and make it work."[374] In other words, the Signal Corps became focused on professional certifications because in stability operations those certifications were needed to work on the computers, servers, and routers that largely characterized much of the deployments in both Iraq and

[372] Ibid., 4-2, 4-3.

[373] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[374] Ibid.

Afghanistan. Because of this focus, the emphasis on planning, installing, operating, and maintaining the other two tiers was not as high of a priority.

In order to provide further development, Colonel Ortiz stated he would like to create a greater emphasis within his own formation on the lower tier of communications. To do this, he would and develop support teams capable of integrating within the Brigades and Battalions to assist in the training and planning of the lower tier of the tactical internet.[375] Perhaps this is a future achievement the Signal Corps can look forward to. Establishing radio communications was something that the Signal Corps were experts in, as was discussed in Vietnam case study. Perhaps with the Division Signal Battalion's help, the Signal Corps will regain this competency.

In summary, this final analytical essay within this case study has discussed the achievements of the Division Signal Battalion (Provisional). The first achievement discussed focused not only on the statistics of signal support the Battalion provided but how having the oversight of multiple signal companies enabled the Brigade Commanders to be more successful. The second portion of the essay discussed the achievement that was noted by the Battalion Commander as his number one achievement, the establishment of a signal leadership development program. The final portion of this essay discussed an area of which need additional emphasis and leader development to properly plan for and execute the lower and mid tiers of the tactical internet.[376] This essay

[375] Department of the Army, Army Training Publication 6-02.60, *Techniques for Warfighter Information Network Tactical* (Washington, DC: Government Printing Office, 2016), 1-6.

[376] Ibid.

concludes the case study portion of this research. Now that the case study has analyzed the three leader competencies of Leads, Develops, and Achieves, the research will now answer the final, secondary research question of: "How does the 3rd Infantry Division's Signal Battalion (Provisional) propose to improve signal leader development?"

How does Division's Signal Battalion (Provisional) propose to improve signal leader development?

From the review of the case study, the research indicates that the Division Signal Battalion (Provisional) is has gone beyond proposing to improve signal leader development is actively improving signal leader development. This essay will incorporate the principles of Army Design Methodology as a framework to answer the final secondary research question.[377] In order to frame the problem and identify the current state of the operational environment the research will incorporate the previous case study that answered the second, secondary research question of, "how has the lack of signal leader development since the advent of modularity impacted the tactical signal force?" The essay will then discuss the "desired future state" of signal officer leader development.[378] The end state will be primarily defined by the actual problem statement that reactivated the Division Signal Battalion. Having identified the current state and the end state the problem statement will originate from the research problem statement and will be expanded upon and incorporated into the design framework. The essay will conclude by examining the operational approach that Colonel Ortiz has set for the

[377] Department of the Army, Army Training Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015).

[378] Ibid., 3-2.

Battalion by examining three lines of effort the Battalion is incorporating to reach their end state.

First of all, the research will define the current state of the leadership development of signal officers within the modular brigade. In the previous case study, the answer to the research question concluded that the signal officer leadership development that is occurring in not facilitated by the Signal officer's Battalion Commander. This was evident in units arriving at CTCs without being properly trained to conduct their signal mission. Secondly, because the Signal Company Commanders are fragmented into separate Brigades, the successes and failures they have are not shared across the signal force. Finally, the removal the senior signal mentor and staff prevents the shaping expanding the understanding of the experiences and failures so that the officer can truly maximize the learning from his success of failures.

A quote from the Chief of Signal's information brief to signal students at the Command and General Staff College is used to create end state frame. This information brief was originally part of a problem statement, but now becomes the end state by simply removing the phrase "does not." The desired end state is: through effective leadership development of signal officers, tactical signal support is now effective and, "enables Division and Brigade level mission command in an expeditionary, austere, full spectrum, and decisive action environment."[379]

Now that the currents state and desired end state has been determined, the problem frame must be developed. From the initial problem statement, the research is

[379] Colonel Robert L. Edmonson II, "Signal Operations" (Brief, P943 Course, Command and General Staff College, Fort Leavenworth, KS, July 18, 2016), Slide 12.

now able to expand upon it. This expansion is due to our understanding from the two previous case studies. The problem statement is: The Army's modularity force structure has compromised the leader development of the company grade signal officers. The removal of a senior signal officer with command authority prevents the signal officers from conducting effective training and adversely affects the level of communications support they provide. The leader development is further hindered by the inefficiencies of sharing lessons learned from the operational experiences and failures that result from each Signal Company being fragmented from the other. Finally, signal officers are not receiving signal specific mentorship that prevents them from making mistakes others have already made or expands their understanding of signal operations.

Now that the research has defined the current state, the desired end state, and the problem statement this essay will now describe the operational approach in terms of lines of effort. An operational approach is "the broad general actions and means to solve and manage identified problems." In other words, the operational approach provides a general description of the activities and methods by which the organization will reach its desired end state. With the understanding that leadership development is the core requirement for creating successful organizations, the operational approach will be centered on this theme. The research will examine the Division Signal Battalions operational approach of leadership development through the use of the lines of effort.

The purpose of lines of effort is "to link objectives in time, space, and purpose to attaining desired end state conditions." [380] While the research did not indicate if the

[380] Department of the Army, Army Training Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015), 4-4.

leadership of the Division Signal Battalion used the Army Design Methodology as it developed its strategy to become a successful organization, three potential lines of effort stand out from the analysis of the case study. Each line of effort is a key part of how the Division Signal Battalion is improving the leader development within the signal force. The three lines of effort identified by the research are training, relationships, and a formal leadership development program.

The first line of effort is to conduct training. This training is not only to provide to signal support to the operations of the BEB or Brigade Headquarters but to a training program that enforces the Army's principles of unit training. The research has indicated because the Signal Company is focused on the support of only the Brigade they do not effectively "train fundamentals first" or "conduct multiechelon and concurrent training."[381] The principle of training the fundamentals first is reflected the level of support provided by the Divisions Signal Battalion in the form of mobile training teams and signal contact teams. The mobile training teams provide signal training to the formations in a more formalized setting. The contact teams are deployed typically during an exercise to ensure the fundamentals taught are integrated and reinforced. This further enforces another principle of army unit training of, "train while operating."[382]

The key principle being enforced in the training strategy of the Division Signal Battalion to improve leader development is to, "conduct multiechelon and concurrent

[381] Department of the Army, Army Doctrine Reference Publication 7-0, *Training Units and Developing Leaders* (Washington, DC: Government Printing Office, 2015), 2-1.

[382] Ibid.

training." [383] Multi-echelon training is defined as, "a training technique that allows for the simultaneous training of more than one echelon on different or complementary tasks."[384] In other words, effectively conducting training at the Team through Battalion level on different tasks that serve to reinforce or enhance the overall training objectives. The Division Signal Battalion conducts multiechelon training when it has multiple signal companies conducting training as well as providing signal support to multiple organizations. They are no longer constricted to only supporting the Brigade headquarters or only supporting the BEB. They are in a very sense becoming more well-rounded on the communications support that they are providing.

The second line of effort is the development and formation of relationships. This line of effort is best described by one of the six principles of mission command of, "build cohesive teams through mutual trust."[385] This principle has two key components of building trust and interpersonal relationships.[386] Colonel Ortiz's provides the example of building trust amongst the Brigade Commanders within the Division. He has built this trust by the development of interpersonal relationships. The Brigade Commander's trust that he is fully invested in making the Brigades successful. The development of trust allows Colonel Ortiz and his Command Sergeant Major to conduct talent management of the signal officers, non-commissioned officers, and soldiers throughout the Division.

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[383] Ibid.

[384] Ibid., 2-3.

[385] Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, 2014), 2.

[386] Ibid., 3.

Because of this talent management Colonel Ortiz in a better position to ensure the signal officers he assigns to the Brigades are sufficiently developed to be successful. Additionally, he will also have some idea of those officers he needs to keep an interest in to ensure they are developed effectively as leaders. If they are not, he can place additional emphasis on the signal officer or find another officer that may be better suited to the position.

The third, and final line of effort is the creation and implementation a signal centric leader development program. While these formal programs may have been attempted to be implemented in the past, it is only with the command authority of a Battalion Commander that these programs truly get the footing needed to be successful. The creation of a formal leader development program harkens to one of Army's principles of leader development, "create a learning environment for subordinate leaders." [387] From the Army Field Manual on training and leadership development describes this environment best:

> Leader growth occurs when subordinates are provided opportunities to overcome obstacles and make difficult decisions. Learning comes from experiencing both success and failure. An environment that allows subordinate leaders to make honest—as opposed to repeated or careless—mistakes without prejudice is essential to leader development and personal growth.[388]

In other words, an environment where signal officers can learn from their mistakes, discuss them amongst their peers, subordinates, and senior leaders makes the

[387] Department of the Army, Army Doctrine Reference Publication 7-0, *Training Units and Developing Leaders* (Washington, DC: Government Printing Office, 2015), 2-4.

[388] Ibid.

organization better. While this principle would have always been maintained even while the signal companies were within the modular brigades, the BEB Battalion Commander would not have been able to provide the same level of expertise that a signal Battalion Commander would be able to apply. This type of leader development program implemented by the Division Signal Battalion is able to create adaptive leaders that understand the art and science of mission command.[389]

What cannot be understated is the importance of the Battalion Commander in leading this improvement in professional development. It is the Battalion Commander who has established the relationships amongst the Brigade Commanders throughout the Division. It is the Battalion Commander that establishes the command climate within the organization and creates a learning environment for subordinate leaders, and it is the Battalion Commander, who is responsible for the training being conducted in his unit. With these three lines of effort combined the signal officer is now enabled to exercise, "disciplined initiative within the Commander's intent to empower agile and adaptive leaders." [390]

In summary, the research indicates that Division Signal Battalion is improving the leader development of signal officers through three lines of effort. These lines of effort are training, relationships, and the establishment of a formal signal leader development program. To arrive at this conclusion, this essay has answered the final research question by using the Army Design Methodology to identify the current state and the end state.

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[389] Ibid.

[390] Department of the Army, Army Doctrine Publication 6-0, *Mission Command* (Washington, DC: Government Printing Office, 2014), 1.

Using the problem statement of this research and expanding upon it, the research was able to identify what was inhibiting the signal force from reaching that the desired end state. With the identification that the core problem was leadership development, an operational approach was created. The operational approach is derived from analysis of the responses from the semi-structured interview conducted with Division Signal Battalion Commander. As a final caveat, the research does not indicate if the command team conducted this type of conceptual planning in creation command philosophy or strategy. The essay concluded with the theme of the research that the Battalion Commander of an organization remains the single most important person when it comes to establishing the leader development environment. Now that the research has answered all the secondary research questions, it will now be able to answer the main research question: "How has the Implementation of U.S. Army Modular Force Structure affected the Leader Development of Signal Corps Officers in Tactical Organizations?"

How has the Implementation of U.S. Army Modular Force Structure affected the Leader Development of Signal Corps Officers in Tactical Organizations?

The research indicates that Leader Development of Signal Corp Officers has been negatively affected because of the modular force structure. The modular force structure has negatively affected the leader development of signal officers because of three critical components in leader development. The first critical component is the lack of emphasis on signal training that has created a less capable and competent signal force. The second is the organizational structure within the Brigade is not conducive to the Brigade S6 and Brigade Signal Company working collectively to provide signal support to operations. The last component is the removal of a senior signal leader in the form of a Battalion

Commander that can adequately provide the oversight and mentorship needed by the signal officers.

The first area that the implementation of the modular force structure has negatively affected leader development of the Signal Corps officers is the training. All three case studies discussed how critical and important training was to the success of an organization. The research indicated that above all else, the key to successful training was having the previous operational experience to create training that adheres the Army principles of unit training.[391] Without this operational experience the unit leadership to, including the Company and Battalion Commander do their very best with the operational experiences that they have.

Two separate instances within the case study enforce this conclusion. The first example was how the Colonel Reeder's operational experience directly contributed to the success of the 9th Signal Battalion, under the 9th Infantry Division.[392] Under Colonel Reeder's leadership, an internal Battalion training organization was created to meet the challenge of not only standing up a newly formed unit but also having the additional challenge that the majority of his Battalion's members "arrived directly from civilian life through the reception station."[393]

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[391] Department of the Army, Army Doctrine Reference Publication 7-0, *Training Units and Developing Leaders* (Washington, DC: Government Printing Office, 2015), 2-1.

[392] Charles R. Myer, *Division-Level Communications, 1962-1973,* Vietnam Studies (Washington, DC: Government Printing Office, 1982), 19, accessed May 17, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll11/id/827.

[393] Ibid.

The second and reinforcing statement of is how operational experience lends itself to know what to train and how to effectively train it comes from Jack Sander on training units before deploying to Iraq. Then, a Major when the interview was conducted, Major Sander stated that, "it was very easy for us to pick through the signal training and say, 'I know the soldiers need to be trained and certified on these tasks,' but that was only because I had so much prior experience on that base and I knew exactly what they would need."[394] Unfortunately, a Brigade Signal Company Commander will likely not have that same level of experience. Nor is the organizational structure of the modular brigade created in such a way that is conducive for the officer to gain that knowledge. The result in signal training programs within the BCTs that are ineffective. However, they are not always recognized as ineffective until the units arrive at CTC and the observer and controllers assess the abilities of signal officers to provide communications support to operations. In short, it is because of this ineffective training that leader development of signal officers is also ineffective.

The research indicated the importance of training within the Division Signal Battalion pilot as well. The importance of training was analyzed to be one of the lines of effort the Battalion is using to actively improve the leader development of Signal officers within the Battalion. Colonel Ortiz emphasized this by his statement of when "the Battalion needs to conduct a SWITCHEX [communications rehearsal] I [Colonel Ortiz]

[394] Jack Sander, Interview with MAJ Jack Sander by Jenna Fike, *Operational Leadership Experiences Project* (Fort Leavenworth, KS: Combat Studies Institute, 2009), 8, accessed March 1, 2017, http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll13/id/1669.

make sure we conduct a SWITCHEX."[395] The statement signifies that when a senior signal leader with his operational experience recognizes the need for additional leader development through training that it can be accomplished. He knows the standards, and through the planning efforts of his staff, he is able to adhere to the principles of unit training with emphasis on signal support to operations.

The next way in which signal officer leader development has been negatively impacted by the modular force structure how is the organizational structure within the Brigade that is not conducive the Brigade S6 and Brigade Signal Company working collectively. This negatively affects the leadership development of the Brigade Signal Company Commander specifically because he is now conflicted about supporting the Brigade S6 while still working for an being rated by a Battalion Commander whose core mission as BEB Battalion Commander is functionally different from his own.

The previous method of how signal planning was conducted was discussed primarily in the literature review. Within the literature review, it was discussed how signal planning prior to modularity was based the identification of communication requirements and that Signal Battalion planning staff would place a great deal of analysis and weight of priorities before assigning communications teams to support the Brigade.[396] While some Brigade S6 officers commented this process was draconian, they did not realize that now they would inherit all these draconian responsibilities. These responsibilities included the planning formerly conducted by the Division Signal

[395] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[396] Department of the Army, Field Manual 11-55, *Mobile Subscriber Equipment (MSE) Operations* (Washington, DC: Government Printing Office, 1999), 4-5.

Battalion with the additional challenge of not having any direct tasking authority of the Signal Companies that Division Signal Battalion reorganized under the Brigades.

The Brigade S6's may have planned for, and engineered, the signal support systems, but when came to the installation, operation, and maintenance of those systems, that was the Brigade Signal Company's responsibility. The Brigade S6 would have to perform the first part of the plan without any direct tasking authority over these assets. In order to make the mission successful, the literature review discussed how the Signal Companies would simply be aligned with the Brigade S6. This type of operational alignment does not serve the leadership development interest of any the officers. The Signal Company Commander is not working for his Commander and under his Commander's intent.

The research indicates that under this operational alignment, the BEB Battalion Commander and his staff lose interest in providing operational oversight of the Brigade Signal Company because it is considered a Brigade asset. The lack of oversight is to such an extent that they may not even know the location of the signal teams when conducting operations.[397] Finally, this alignment also negatively affects the leader development of the signal officers for both the Brigade S6 and Signal Company Commander. The Brigade S6 has now essentially become the Commander of the Brigade Signal Company, and the actual Company Commander misses yet another leader development experience. The also an associated opportunity cost of having the Brigade S6 so intertwined with

[397] Mariah McCallum, "Who Secures, Sustains, and Emplaces the Brigade Signal Company" (Unpublished Article Submitted to the Center for Army Lessons Learned, U.S. Army, Fort Leavenworth, KS, 2016), 2.

operations of the Brigade Signal Company. Specifically meaning, that when he is in effect the Signal Company Commander, he is no longer as focused on his primary Brigade staff officer responsibilities. In short, a great deal of operational leadership development experience is sacrificed to make signal support function within the modular brigade.

The Division Signal Battalion pilot program has re-implemented the identification of requirements and Divisional priority when providing signal support. Because of this, the leadership development looks more traditional. The Brigade S6 conducts his mission analysis with the Brigade Staff and requests support through the Division Signal Battalion.[398] This forcing function of conducting mission analysis to get the required support makes the Brigade S6 officer very focused on making sure his analysis is complete to the level of detail to get the maximum support needed. Also, the Signal Battalion Commander issues the orders to the Signal Company and makes sure they operate within his Commander's intent. The signal officer in command of the Company remains in command of that Company. The Brigade S6 remains the primary signal advisor to the Brigade Commander and can focus on coordinating and, "planning the communications and information systems support for the Brigade."[399]

The last way the implementation of the modular force structure has adversely affected leader development of signal officers is the removal of a senior signal leader in the form of a Battalion Commander. The Battalion Commander is the single person

[398] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[399] Department of the Army, Field Manual 6-02, *Signal Support to Operations* (Washington, DC: Government Printing Office, 2014), 2-2.

within the organization who has the greatest effect on the officers under him.[400] That is because he is the one who sets priorities and implements programs because he has the command authority to do so. Succinctly, it is up to the Battalion Commander to, "create a learning environment for subordinate leaders."[401]

The leader development discussed in the first case study was very focused at the Division Signal Battalion Commander level. The analysis of this case study significantly discussed the importance of having this senior signal leader with a formal chain of command. Because of this formal chain of command, the Division Signal Battalion Commanders had effectively trained signal units. Because of the effectiveness of the training, significant communications achievements occurred at the Division and below level throughout the Vietnam era.

The contrast in achievements portion of the second case study focused on the modular signal support was significant. Without a senior signal leader with command responsibility to provide oversight of communications, there was a lack achievements at the Division level and below. Instead, the research indicated the Army Signal officers appeared to no longer be as capable as their predecessors had once been. This is reinforced by the 2008 RAND study which stated, "the data on the quality of network and network devices illustrate that O-6 and Signal [branch]generally have the best reach and

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[400] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), 32, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[401] Department of the Army, Army Doctrine Reference Publication 7-0, *Training Units and Developing Leaders* (Washington, DC: Government Printing Office, 2015), 2-4.

capabilities and that O-3 and combat branches have the worst reach and capabilities."[402] This is not to say that the Signal Corps as a branch has not had successes since moving to a modular force structure. The research simply indicates the trend seems to support a continual decline in the level of support provided at the Division level and below when there is not a Division Signal Battalion Commander within the formation.

The final case study illustrates why the Battalion Commander at the Division Signal Battalion is key to providing the leadership development. The Battalion Commander cited the Battalion's number one achievement is the establishment of a formal leadership development program.[403] This implies that Colonel Ortiz and therefore, the Division Signal Battalion pilot has identified the core ability to have a successful organization. This ability is that its leaders are sufficiently developed with the skills within their branch that will allow them to be successful. The Division Signal Battalions leadership development program further made it a point to emphasize the peer to peer relationships and information sharing among Signal Company Commanders and Platoon Leaders. These relationships had all but ceased to exist under the modular force structure. This was best highlighted by Colonel Ortiz's first leader development meeting in which he asked, "who had seen each other before outside of OBC [officer basic course] or Captains Career Course and no one raised their hand."[404]

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[402] Timothy M Bonds, et al., *Army Network-Enabled Operations: Expectations, Performance, and Opportunities for Future Improvements* (Santa Monica, CA: RAND Corporation, 2012), 160, accessed February 15, 2017, http://www.rand.org/pubs /monographs/MG788.html.

[403] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[404] Ibid.

In summary, the implementation of the Army's modular force structure has negatively affected the leader development of Signal Corps Officers in tactical organizations. The research indicates that leader development has been most affected by a lack emphasis on signal training within the modular force. The second way it has been impacted was the creation of organizational structure within the BCTs that created confusion within the command structure between the Signal Company Commander, the BEB Battalion Commander, and the Brigade S6. The final way in which the force structure has negatively affected the leader development of signal officers is the removal a senior signal officer with command authority that was able to effectively shape the training and leader development of the signal officers within the Division and subordinate organizations.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The research has discussed leader development through the analysis of three case studies. The case studies focused on signal officer leader development from the pre-modular force structure, the modular force structure, and the Division Signal Battalion pilot program. The research concludes that the current modular force structure is an inefficient organization for the leader development of Signal Corps officers. The modular force structure is inefficient because it fragments signal corps officers at the Division and below level. The signal officers in a BCT are dependent upon inefficient informal relationships of senior signal officers to affect and influence their leader development.

While the Army has and will continue to use informal networks successfully, the use of these informal networks will always be secondary to the formal networks. Formal networks form the Army's hierarchical structure that is the formal chain of command. The Commander at any level of that chain of command is the leader who drives the allocation of training resources, time, and leader development. The allocation of resources is shaped primarily by the Commander's operational experiences. When a commander is not the same branch as the Company Commander, it is challenging to know the type of oversight that is needed to develop that subordinate officer effectively.

The research concludes that signal officers are developed as leaders in BCTs, but not with the equal emphasis or with as much specificity as other basic branches. The gap in leader development is because non-signal branch Battalion Commanders can only truly develop the signal officers in terms of generalities or at best, from the standpoint of

limited familiarity. They may ask questions to gain a better understanding and may even be able to become better informed by reading signal doctrine or professional articles. These efforts, while appreciated, cannot replace a signal officer with a similar level of experience. The efforts cannot replace the hard lessons learned in regards to installing, operating, or maintaining communications equipment. They cannot replace knowing which signal training areas to apply emphasis to and others to pay less attention. Finally, they cannot replace the facilitation of peer to peer learning and leader development environment that is no longer taking place between signal officers in modular brigades.

Secondly, Battalion Commanders within BCTs expect their basic branch staff officers to be the expert within their branch. The requirement that staff officers be the expert within their basic branch is valid and is why they are the principal advisor to the Commander. The Signal Company Commander should also be the most senior signal Captain within the Brigade formation. With these expectations that the signal officer knows and understands his job better than anyone else in the formation, it appears that the leadership within the Battalion makes an assumption that the signal officer is doing the things that he should be doing to prepare his Company and soldiers.

In a 2008 RAND study, the research indicated that most valuable leader developments occurred while "leading a unit during operations or tactical training exercises."[405] The research has identified that the lack of oversight in the training and assessment of the signal officers during operations or training is inadequate to develop

[405] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field* (Santa Monica, CA: RAND Corporation, 2008), xviii, 25, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

signal officers in this manner effectively. With this in mind, what other methods of leader development could a signal officer seek out to personally develop himself? The first way is to seek mentorship from either the Brigade S-6 or Division G-6. This method allows the signal officer the chance to learn and be developed by someone senior to themselves. The research indicated that if this relationship was strong, the signal officers were able to perform their mission more efficiently. The second way an officer could personally develop himself is to read and study the available written information in the form of professional articles or doctrine. This personal study must be done with the intent to become a more knowledgeable officer and give back to their branch as well as profession. Within the RAND study, these two learning experiences ranked sixth and eighth in respectively for effectiveness in the development of both junior and senior Captains as well as junior Majors.[406] In other words, while these two methods may be the most relevant to shape the leader development of signal officers, they are not the most efficient.

Because the Signal Corps is a technical branch, a common response has been to focus on providing more technical training in a formal setting. The signal corps 25G (twenty-five golf) military occupational specialty provides an excellent example of the belief that focusing on senior signal officer technical training would close the gap in leader development at the Brigade and below level. In its initial concept, the 25G was meant to be a "concept that will provide additional technical education . . . to lead in this increasingly technical environment . . . [and] provide a better understanding of technical

[406] Ibid.

capabilities that can support a myriad of missions"[407] The 2008 RAND study listed attendance in classroom lectures 11out of 12 possible answers in the effectiveness of leadership development experiences.[408] The 25G example demonstrates the Signal Corps attempt at providing a centralized form of leader development to signal officers before they join or rejoin the operational force. This centralized method is inefficient because while these few additional weeks of technical training may put the signal officer in a better position to conduct planning, the senior signal leader oversight is not there to help ensure that the operationalization of this knowledge is being applied correctly.

In February of 2017, the Office of the Chief of Signal sent a formal email to all Colonels and Lieutenant Colonels within the Signal Corps. The email explained the 25G program was being eliminated due to, "challenges which could adversely affect Maneuver and Support formations."[409] One of the four challenges in the email cited that, "requiring MAJ/O4s [Majors] to attend the 25G course for 19.4 weeks following ILE [intermediate level education] would not always fit operational expectations."[410] In other words, the operational force could not spare the Brigade S6 to potentially attend a yearlong Command and General Staff Course at Fort Leavenworth and then attend the

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[407] Office Chief of Signal Staff, "Signal Regiment Personnel Structure Evolving to Support Changing Operations," *Army Communicator* 37, no. 4 (2012); 7, accessed April 26, 2017, https://www.dtic.mil/get-tr-doc/pdf?AD=ADA590540.

[408] Peter Schirmer et al., *Leader Development in Army Units: Views from the Field (*Santa Monica, CA: RAND Corporation, 2008), xviii, 25, accessed January 25, 2017, http://www.rand.org/pubs/monographs/MG648.html.

[409] Robert L. Edmonson, II, "Chief of Signal Sends... (25G Update)," e-mail to Signal Corps Regimental Colonels, February 26, 2017.

[410] Ibid.

25G course for an additional five months. The combination of these two courses would cause the signal officer to be out of the operational force for approximately a year and a half. The decision to cancel the 25G program reflects the inefficiencies of addressing the lack of leader development through a centralized educational process.

To briefly summarize, signal leader development would ideally occur within the modular force by three methods. The first method is the use of informal leader development networks such as the Brigade S6 or Division G6. The second method is to engage in professional reading and for the officer to take a primary role in professional development on himself. The final method is to conduct centralized technical signal training. However, all three of these methods are inefficient forms of leader development. These methods in leader development only address the symptoms caused by an inefficient force structure. They do not address the core problem of needing to modify the force structure of the modular brigade to enable the more efficient forms of leader development. The research indicates that because of these inefficiencies in leader development created by the modular force structure the Signal Corps is less effective than it was before modularity.

Why wasn't this decline apparent for all the years of deployments and operations conducted in Iraq and Afghanistan? The research argues that the decline was not apparent for two reasons. The first reason is the constant rotation of units into a reasonably well developed and mature information and communications systems network. With such a mature information environment signal officers were not significantly challenged. Deployments for the last 16 years of conflict in both Iraq and Afghanistan have been characterized by units occupying static locations that support the installation of

commercial communications equipment. In a mature theater, signal officers only had to maintain this network and therefore were not significantly challenged. The lack of leader development has only come into view more recently at the CTCs since, "all rotations at NTC [are] decisive action and no longer consist of the COIN [counter insurgency] . . . [with units] no longer [falling] in on an already established infrastructure."[411] In other words, signal officers must now conduct planning for not only stability operations but also offensive and defensive operations. To add to this complexity the well-developed communications infrastructure that represented the infrastructures of Iraq and Afghanistan has been removed. The CTC rotations go poorly because of an inadequate leader development and a lack of senior signal leaders who can mentor and prepare the signal officers for a CTC rotation supporting decisive operations. In short, the signal officers are having operational experiences that they have not been adequately developed to be successful within.

The second reason the decline was not apparent was that leaders accepted a low performance from the lower tier of the tactical internet. This was because the emphasis was placed on commercial communications capabilities. Specifically, email, collaboration websites such as SharePoint, and full-motion streaming video. The accessibility of these services comes from the upper tier of the tactical internet. To effectively operate within the upper tier requires commercial communications equipment, professional certifications, and contracted personnel required to support this tier. Because

[411] Army Signal Center, "A Signal Officer Perspective at the National Training Center," *Army Communicator* 40, no. 4 (Winter, 2015): 8, accessed January 11, 2017, http://www.signal.army.mil/ArmyCommunicator/2015/Vol40/No4/Winter_2015_Online.pdf.

communicating on the lower tier of the tactical internet was not an everyday occurrence a substandard level of execution of that portion of the network was accepted. What modern signal doctrine describes as the lower tier of the tactical internet had a great deal of emphasis placed on it during the Vietnam era. When comparing the case studies, it becomes apparent that this skillset within the Signal Corps has atrophied. This situation is only compounded if the Battalion Commander of BEB is not as concerned about the location of his retransmission teams than he is about the location of his engineer teams.

The lack of signal leader development has only become more apparent as the Army increases its aperture from only conducting stability operations to now include all the forms of operation under decisive action. Decisive action is defined as, "the continuous, simultaneous combination of offensive, defensive, and stability or defense support of civil authorities [sic] tasks."[412] Because decisive action includes not only stability operations but also offensive and defensive operations it is more complex and inherently more difficult. As operations become more complicated, a directly proportional rate of increase in deliberate planning should also occur. Meaning, if the officer has never planned for or previously experienced planning for complicated operations he should seek the guidance of a senior signal officer. This senior signal officer may have both experience in and the knowledge of the type of detailed planning needed to guide the junior officer. In short, without the previous experiences to draw upon, the probability of being successful during the planning process decreases as the level of complexity increases.

[412] Department of the Army, Field Manual 3-0, *Operations* (Washington, DC: Government Printing Office, December 2016), 3-1.

When conducting deliberate planning for decisive action, the lack of experience of the Brigade Signal Officer and the Brigade Signal Company Commander places them at a distinct disadvantage. The Brigade S6 must essentially plan with the operational experience of those within his staff. He should collaborate his planning efforts with the Signal Company Commander and Battalion S6s. It would also be recommended that his plan is briefed to other signal officers on the Division G6 staff, if not the Division G6 himself, to make sure the signal plan is complete enough to support an operational course of action.

This process is currently in place within the Division Signal Battalion pilot program.[413] When the Brigade S6 requests support from the Division Signal Battalion, he must ensure that his mission analysis is complete as possible to maximize the signal support to his Brigade. This also means that the Brigade S6 reviews his signal plan with the Division Signal Battalion's S3 and three signal warrant officers. The Division Signal Battalion Commander has stated that already he has witnessed an improvement in the Brigade S6's mission analysis because of this requirement.[414]

The final conclusion is the Division Signal Battalion is a more efficient organization in providing leader development of signal officer. This is primarily due to the command authority of the Division Signal Battalion. The efficiency is primarily achieved through the It is the Battalion Commander's authorities to positively affect leader development through the prioritization of signal centric training resources. It is

[413] Osvaldo Ortiz, interview by author, Fort Leavenworth, KS, May 2, 2017.

[414] Ibid.

enhanced the Battalion Commander's the ability to build an interpersonal relationship with Brigade Commanders across the division and provide them excellent signal support to their operations.

Finally, the Division Signal Battalion is more efficient because it provides a senior signal leader who can establish a formal leader development program. Within this program, the Battalion Commander can provide the oversight needed to make certain signal officers are progressing as efficiently in their leader development. This organization even in its pilot form has already made a positive impact the leader development of signal officers as well as paying operational dividends to the modular force by providing better overall signal support to the modular brigades than they had under the previous force structure design. The bottom line is, the Division Signal Battalion was and is a more conducive environment for signal leaders to be developed. A more developed signal officer force facilitates improved signal support to operations. In closing, the reincorporation of the Division Signal Battalion back into the force structure design will make us a better Army.

Recommendations

There are three recommendations for further study in this research area. The first is to determine how modularity has affected the non-commissioned officers of the Signal Corps. The second recommendation for additional study is to see the if the Military Intelligence Company within the BCT and, as a whole, the Military Intelligence Corps has a similar perspective on modularity as the Signal Corps. The final recommendation for research is a post-mortem analysis of which signal pilot program was implemented and why.

The first recommendations for further study is if modularity has affected the leader development of the non-commissioned officers within the Signal Corps. The results of this study would be interesting first to see if the conclusion reached within this study would match the conclusions within the officer-centric study. If the conclusions from that study would be different, would is the preferred force structure design that best enables the signal non-commissioned officer to become be developed as a leader.

The second recommendation for research is to explore how the Military Intelligence Corps has fared with its leadership development in the modular force structure. If the Military Intelligence community does not share similar conclusions why has it that so and what lessons can the Signal Corps learn from the Military Intelligence Corps in this regard.

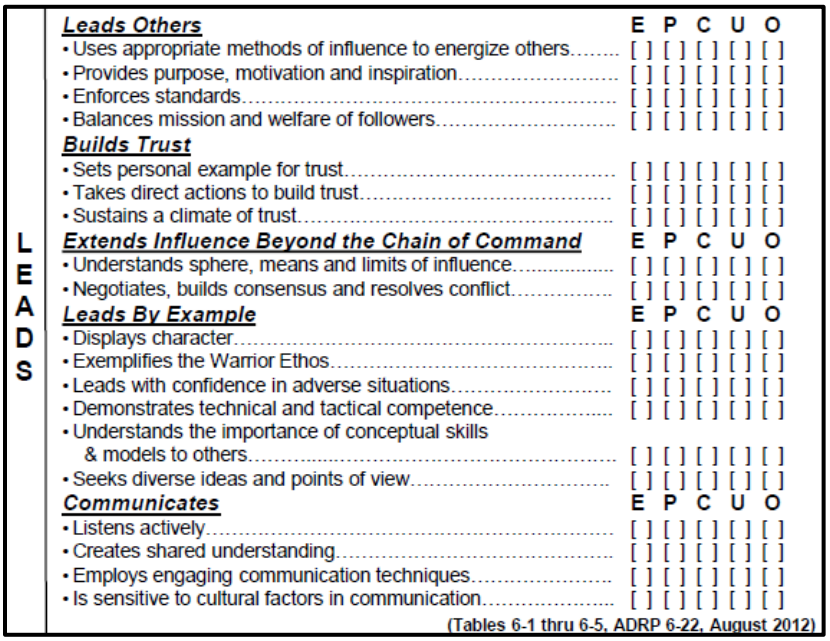
The third recommendation for future study is a post-mortem analysis of which the three signal pilot programs was chosen for implementation. Why was one pilot program chosen of the other two? Alternatively, if all three were deemed unfeasible, why was the decision made to continue to conduct operations within the modular force structure. Such a study is recommended to include two topics within the literature review. The first is an analysis of how these three pilot programs were decided upon as possible options. The second topic is a review of how other land component forces conduct signal operations in support tactical operations.

In summary, the three recommendations for future study are the impact of leadership development within the non-commissioned officers of the Signal Corps, if the impact of leadership development has been similar to the Military Intelligence Corps, and finally when post-mortem analysis on the Army's signal pilot programs. These three

recommended areas for future study will be complimentary to the research conducted within this thesis.

APPENDIX A

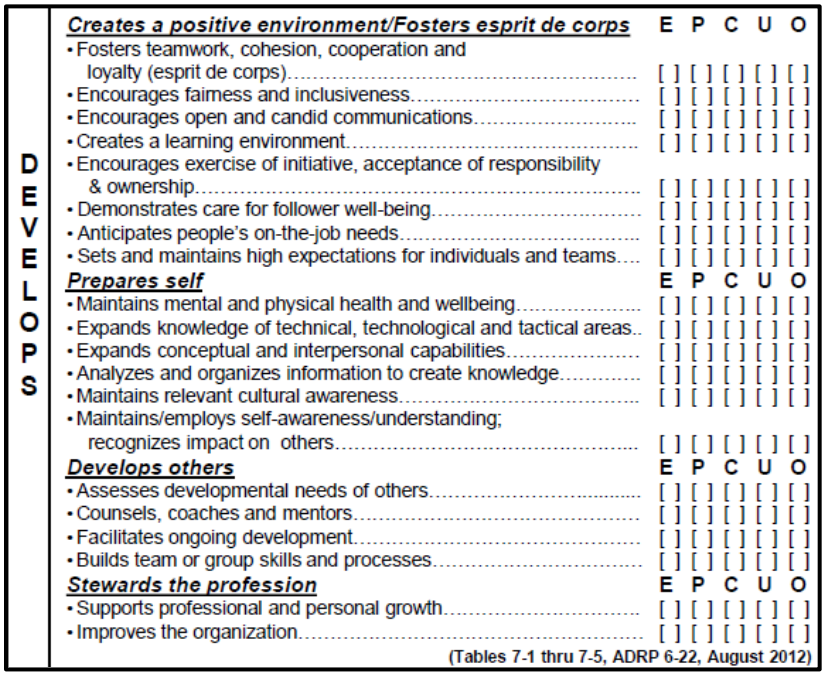
CODING TABLES USED FROM THE LEADERSHIP ATTRIBUTES AND COMPETENCIES REFERENCE CARD (LARC)



LEADS						
	Leads Others	**E**	**P**	**C**	**U**	**O**
	• Uses appropriate methods of influence to energize others	[ ]	[ ]	[ ]	[ ]	[ ]
	• Provides purpose, motivation and inspiration	[ ]	[ ]	[ ]	[ ]	[ ]
	• Enforces standards	[ ]	[ ]	[ ]	[ ]	[ ]
	• Balances mission and welfare of followers	[ ]	[ ]	[ ]	[ ]	[ ]
	Builds Trust					
	• Sets personal example for trust	[ ]	[ ]	[ ]	[ ]	[ ]
	• Takes direct actions to build trust	[ ]	[ ]	[ ]	[ ]	[ ]
	• Sustains a climate of trust	[ ]	[ ]	[ ]	[ ]	[ ]
	Extends Influence Beyond the Chain of Command	**E**	**P**	**C**	**U**	**O**
	• Understands sphere, means and limits of influence	[ ]	[ ]	[ ]	[ ]	[ ]
	• Negotiates, builds consensus and resolves conflict	[ ]	[ ]	[ ]	[ ]	[ ]
	Leads By Example	**E**	**P**	**C**	**U**	**O**
	• Displays character	[ ]	[ ]	[ ]	[ ]	[ ]
	• Exemplifies the Warrior Ethos	[ ]	[ ]	[ ]	[ ]	[ ]
	• Leads with confidence in adverse situations	[ ]	[ ]	[ ]	[ ]	[ ]
	• Demonstrates technical and tactical competence	[ ]	[ ]	[ ]	[ ]	[ ]
	• Understands the importance of conceptual skills & models to others	[ ]	[ ]	[ ]	[ ]	[ ]
	• Seeks diverse ideas and points of view	[ ]	[ ]	[ ]	[ ]	[ ]
	Communicates	**E**	**P**	**C**	**U**	**O**
	• Listens actively	[ ]	[ ]	[ ]	[ ]	[ ]
	• Creates shared understanding	[ ]	[ ]	[ ]	[ ]	[ ]
	• Employs engaging communication techniques	[ ]	[ ]	[ ]	[ ]	[ ]
	• Is sensitive to cultural factors in communication	[ ]	[ ]	[ ]	[ ]	[ ]

(Tables 6-1 thru 6-5, ADRP 6-22, August 2012)

"Leads" Coding Table



DEVELOPS						
	Creates a positive environment/Fosters esprit de corps	**E**	**P**	**C**	**U**	**O**
	• Fosters teamwork, cohesion, cooperation and loyalty (esprit de corps)	[ ]	[ ]	[ ]	[ ]	[ ]
	• Encourages fairness and inclusiveness	[ ]	[ ]	[ ]	[ ]	[ ]
	• Encourages open and candid communications	[ ]	[ ]	[ ]	[ ]	[ ]
	• Creates a learning environment	[ ]	[ ]	[ ]	[ ]	[ ]
	• Encourages exercise of initiative, acceptance of responsibility & ownership	[ ]	[ ]	[ ]	[ ]	[ ]
	• Demonstrates care for follower well-being	[ ]	[ ]	[ ]	[ ]	[ ]
	• Anticipates people's on-the-job needs	[ ]	[ ]	[ ]	[ ]	[ ]
	• Sets and maintains high expectations for individuals and teams	[ ]	[ ]	[ ]	[ ]	[ ]
	Prepares self	**E**	**P**	**C**	**U**	**O**
	• Maintains mental and physical health and wellbeing	[ ]	[ ]	[ ]	[ ]	[ ]
	• Expands knowledge of technical, technological and tactical areas	[ ]	[ ]	[ ]	[ ]	[ ]
	• Expands conceptual and interpersonal capabilities	[ ]	[ ]	[ ]	[ ]	[ ]
	• Analyzes and organizes information to create knowledge	[ ]	[ ]	[ ]	[ ]	[ ]
	• Maintains relevant cultural awareness	[ ]	[ ]	[ ]	[ ]	[ ]
	• Maintains/employs self-awareness/understanding; recognizes impact on others	[ ]	[ ]	[ ]	[ ]	[ ]
	Develops others	**E**	**P**	**C**	**U**	**O**
	• Assesses developmental needs of others	[ ]	[ ]	[ ]	[ ]	[ ]
	• Counsels, coaches and mentors	[ ]	[ ]	[ ]	[ ]	[ ]
	• Facilitates ongoing development	[ ]	[ ]	[ ]	[ ]	[ ]
	• Builds team or group skills and processes	[ ]	[ ]	[ ]	[ ]	[ ]
	Stewards the profession	**E**	**P**	**C**	**U**	**O**
	• Supports professional and personal growth	[ ]	[ ]	[ ]	[ ]	[ ]
	• Improves the organization	[ ]	[ ]	[ ]	[ ]	[ ]

(Tables 7-1 thru 7-5, ADRP 6-22, August 2012)

"Develops" Coding Table

ACHIEVES	***Gets results***	E	P	C	U	O
	• Prioritizes, organize & coordinates the team	[ ]	[ ]	[ ]	[ ]	[ ]
	• Identifies and accounts for capabilities of the team and their commitment to task	[ ]	[ ]	[ ]	[ ]	[ ]
	• Designates, clarifies, and deconflicts roles.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Identifies, contends for, allocates and manages the team.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Removes obstacles to team	[ ]	[ ]	[ ]	[ ]	[ ]
	• Recognizes and rewards good performance.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Recognizes and corrects detrimental performance.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Seeks, recognizes & takes advantage of opportunities to improve performance.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Communicates vision, intent and expectations to the team, makes feedback part of work processes.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Ensures team's shared values / goals and cooperation	[ ]	[ ]	[ ]	[ ]	[ ]
	• Executes plans to accomplish the mission.....	[ ]	[ ]	[ ]	[ ]	[ ]
	• Identifies and adjusts to internal and external influences.....	[ ]	[ ]	[ ]	[ ]	[ ]

"Achieves" Coding Table

Source: Center for Army Leadership, Graphic Training Aid (GTA) 22-06-007, "Leadership Attributes and Competencies Reference Card (LARC)," 2016, Center for Army Leadership, accessed January 31, 2017, http://usacac.army.mil/sites/default/files/documents/mccoe/LARC.pdf.

APPENDIX B

APPROVAL TO CONDUCT HUMAN SUBJECTS RESEARCH

DEPARTMENT OF THE ARMY
U.S. ARMY COMBINED ARMS CENTER
Office of Human Protections and Research Compliance
100 STIMSON AVENUE
FORT LEAVENWORTH, KANSAS 66027-2301

REPLY TO
ATTENTION OF

ATZL-LDA-HPA

2 May 2017

MEMORANDUM FOR: MAJ Adam Brinkman, U.S. Army Command and General Staff College, Ft. Leavenworth, KS 66027

SUBJECT: Approval to Conduct Human Subjects Research

1. Your protocol to research the roles leader development fulfills in the generation of a competent tactical signal force was reviewed on 2 May 2017 and determined to be exempt from Institutional Review Board (IRB) review. Your proposal meets Exemption #2 of 32 CFR 219.102(b): "Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) Any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation."

2. Thank you for following the ethical and regulatory guidelines of human subject's research by submitting your application and all supporting documents before data collection. Your updated interview questions are approved.

3. You have been assigned protocol approval number 17-05-001. Reference this number when submitting any additional documentation or requesting information from the human protections administrator concerning your research proposal.

4. You are expected to comply with all conditions indicated in this memorandum and to follow your approved protocol. You are subject to monitoring by a member of the IRB to ensure compliance. Failure to follow these guidelines could result in the termination of the approval for your research.

5. Any further modifications to this study (including, but not limited to, changes in recruitment materials or procedures, investigators, inclusion/exclusion criteria, interview/survey questions, or data collection procedures, or increases in the number of participants enrolled) must be submitted as a written amendment for review and approval prior to implementing the change.

6. ***You are required to use an informed consent form.

7. You are approved to conduct interviews only.

8. You are not approved to collect survey data.

10. Securely maintain all research documents and data collected for three (3) years.

11. POC is the undersigned at bobbie.j.murray6.civ@mail.mil.

Bobbie J Murray

BOBBIE J. MURRAY
Human Protections Administrator
U.S. Army Command and General
Staff College

APPENDIX C

SEMI-STRUCTURED INTERVIEW QUESTIONS

1. Why has the Army authorized the creation of the Division Signal Battalion (DSB)?

2. What is the role of the DSB?

3. What is your command relationship to the Brigade Combats Teams Signal Companies?

4. What are your measures of performance for the DSB pilot program?

5. What successes have you had within the DSB?

6. What could be improved within the DSB?

7. Describe the importance of the role of the Battalion Commander in the professional development and mentorship of company grade officers?

8. What approach as a Division Signal Battalion Commander have you used to improve signal leader development?

9. What feedback has received from your Company Grade officers in either an improvement or degradation of their performance based upon their time working with the DSB?

10. How would you describe your leadership development program?

11. Are there any additional comments that you wish to add that may further the purpose of this study?

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