ARMY INTELLIGENCE SUPPORT TO THE DIVISION IN LARGE-SCALE COMBAT OPERATIONS

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This thesis analyzes the deep sensing capabilities gap in the current division structure identified in the Army's large-scale combat operations study. After Vietnam, the Army activated the Combat Electronic Warfare Intelligence (CEWI) battalions in each division to provide them with their first organic intelligence units to help locate deep enemy targets. These units were deactivated under the modularization plan, which created an information collection gap in the division deep area. To address this gap, the thesis analyzed three organizational models of intelligence units to determine what is required to fill this deep sensing gap. The variables of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) are applied to Army design methodology to provide a comparative analysis. The research concluded that battalion sized organizations are required to fill the capabilities gap but was inconclusive as to whether they should be independent organizations or should by organic to the divisions.

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

ABSTRACT

ARMY INTELLIGENCE SUPPORT TO THE DIVISION IN LARGE-SCALE COMBAT OPERATIONS, by Andrew Michael Bunce, 108 pages.

This thesis analyzes the deep sensing capabilities gap in the current division structure identified in the Army's large-scale combat operations study. After Vietnam, the Army activated the Combat Electronic Warfare Intelligence (CEWI) battalions in each division to provide them with their first organic intelligence units to help locate deep enemy targets. These units were deactivated under the modularization plan, which created an information collection gap in the division deep area. To address this gap, the thesis analyzed three organizational models of intelligence units to determine what is required to fill this deep sensing gap. The variables of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) are applied to Army design methodology to provide a comparative analysis. The research concluded that battalion sized organizations are required to fill the capabilities gap but was inconclusive as to whether they should be independent organizations or should by organic to the divisions.

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ACRONYMS

ADM	Army Design Methodology
ADP	Army Doctrine Publication
ARNG	Army National Guard
BCT	Brigade Combat Team
C&E	Collection and Exploitation
CEWI	Combat Electronic Warfare Intelligence
CI	Counterintelligence
COIN	Counterinsurgency
CoIST	Company Intelligence Support Team
COL	Colonel
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership and Education, Facilities, Policy
EAB	Echelons Above Brigade
E-MIB	Expeditionary Military Intelligence Brigade
E-MIBN	Expeditionary Military Intelligence Battalion
EW	Electronic Warfare
FDU	Force Design Update
FM	Field Manual
FORSCOM	Forces Command
GEOINT	Geospatial Intelligence
HHBN	Headquarters and Headquarters Battalion
HUMINT	Human Intelligence
IEW	Intelligence and Electronic Warfare

IOSS	Intelligence Organization and Stationing Study
ISR	Intelligence, Surveillance, and Reconnaissance
LSCO	Large-Scale Combat Operations
LTC	Lieutenant Colonel
MDO	Multi-Domain Operations
MET	Mission Essential Task
MI	Military Intelligence
MICO	Military Intelligence Company
MOS	Military Occupational Specialty
PED	Processing, Exploitation, and Dissemination
SIGINT	Signals Intelligence
TLS	Terrestrial Layer System
UAS	Unmanned Aerial Systems
USAICoE	United States Army Intelligence Center of Excellence
USAR	United States Army Reserve
WFF	Warfighting Function

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CHAPTER 1

INTRODUCTION

The 2017 National Security Strategy reinforced the need for a dramatic change in the military when it stated that the United States will maintain peace through strength by rebuilding the military so it can deter the nation's adversaries, and prevail in armed conflict.[1] To accomplish this, the U.S. Army must shift from preparing for stability operations and focus on conducting Large-Scale Combat Operations (LSCO) against peer or near-peer threats. "Large-scale ground combat is more likely today than at any point since the end of the Cold War. And the risk of great power conflict will likely persist into the distant future."[2]

The current edition of Field Manual (FM) 3-0 states that the Army's primary mission is to, ". . . organize, train, and equip its forces to conduct prompt and sustained land combat to defeat enemy ground forces and seize, occupy, and defend land areas."[3] To accomplish this mission, the Army supports the joint force and international partners by performing four strategic roles during unified action. These roles are to shape the

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[1] U.S. President, *National Security Strategy of the United States of America* (Washington, DC: The White House, 2017).

[2] Michael D. Lundy, "Meeting the Challenge of Large-Scale Combat Operations Today and Tomorrow," *Military Review* (September-October 2018); 111-118, accessed 1 September 2019, https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/September-October-2018/Lundy-LSCO

[3] Headquarters, Department of the Army (HQDA), Field Manual (FM) 3-0, *Operations*, Change 1 (Washington, DC: Government Printing Office, December 2017), 1-5.

operational environment, prevent conflict, prevail in large-scale ground combat, and to consolidate gains.[4]

The protracted conflicts in Iraq and Afghanistan degraded the Army's competitive advantage against peer and near-peer adversaries in LSCO. "While the last seventeen years of limited contingency and counterinsurgency operations were necessarily brigade-centric, conflict with peer and near-peer threats requires a continued culture shift as well as the optimization of [echelons above brigade (EAB)] into highly capable divisions, corps, field armies, and theater armies."[5] This threat requires a multi-domain focus, meaning that the land, sea, air, space, and cyberspace will all play critical roles in the next conflict. Previous combat actions against peer or near-peer adversaries have not had contested space and cyberspace domains, which creates new challenges for the Army.

This new focus drove the Army to conduct an in-depth LSCO Study, which identified seventeen capability gaps that must be filled to prevent the Army's defeat or unacceptable loss in a multi-domain fight in LSCO.[6] This study determined that EAB formations are the most decisive organizations in LSCO, and the Brigade Combat Team (BCT) cannot be the primary echelon as it has been during Counterinsurgency (COIN) operations. The changes to the organizational design over the last eighteen years has optimized the Army to fight counterterrorism and COIN threats at the expense of LSCO.[7]

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[4] HQDA, FM 3-0.

[5] Lundy, "Meeting the Challenge."

[6] U.S. Army Combined Arms Center (CAC), *The LSCO Study* (Fort Leavenworth, KS: CAC, 2 August 2019).

[7] Ibid.

The LSCO Study identified gaps in the intelligence Warfighting Function (WFF) at EAB. LSCO Gap One identified that there is a disparity in deep sensing, indications and warnings, analysis, Processing Exploitation and Dissemination (PED), and Integrated crisis early warning systems.[8] The deep sensing gap refers to the Army's inability to collect information and intelligence at a long distance beyond the front lines. The current structure of the Army division and corps do not have the intelligence personnel or equipment to close this capability gap without augmentation or degrading the capabilities of the BCTs.

Background

In the early 1970s, the Army began transitioning from the infantry centric airmobile doctrine used in the Vietnam War to combined arms warfare centered on defending western Europe against the Soviet Union.[9] This transition was heavily influenced by Israel's success in defeating the Arab armies in the Yom Kippur war in 1973. The Israelis demonstrated exceptional usage of terrain, maneuver, combined arms coordination, and centralized planning that enabled them to defeat a numerically superior force that had surprised and initially overwhelmed their military. In July 1976, the Army published FM 100-5, *Operations*, which addressed how the Army should fight against a numerically superior USSR mechanized force. This manual tied tactics to the available weapon systems and the terrain in Germany where U.S. forces would defend against a

[8] CAC, *The LSCO Study*.

[9] John L. Romjue, "Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982," (TRADOC Historical Monograph Series, United States Army Training and Doctrine Command, Fort Leavenworth, KS, January 1984).

Soviet Invasion.[10] This doctrine became known as the "active defense" because it required commanders to mass forces on likely penetration points to force the enemy to reveal and commit his main attacking force. This would then allow U.S. commanders to deploy their main combat forces in the appropriate defensive locations.[11]

The 1976 version of FM 100-5 was defensively focused and relied heavily on firepower and deliberate lateral movements, which negated many of the advantages of maneuver warfare.[12] The publication was based on the assumption that the Soviets would attempt to penetrate the NATO lines in specific areas, such as the Fulda Gap, and did not account for the possibility of an attack across a broad front.[13] The active defense also relied heavily on the assumption that indications and early warning Signals Intelligence (SIGINT) would be able to locate the Soviet's massed formations. If a commander was unable to locate where the Soviets were going to mass their forces early in the battle, the main defense could be deployed to the wrong locations. This created inherent risk in the doctrine because it was reliant on specific conditions on the battlefield to occur and discounted the fog of war that leads to uncertainty.

The challenges with the active defense doctrine led to the development of the "AirLand Battle" model in the early 1980s. AirLand Battle was based on the premise that

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[10] Romjue, "Active Defense to AirLand Battle."

[11] Ibid.

[12] Patrick Kelly III, "The Electronic Pivot of Maneuver: The Military Intelligence Battalion (Combat Electronic Warfare Intelligence) {MI BN (CEWI)}" (Monograph, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, KS, 4 February 1993).

[13] Romjue, "Active Defense to AirLand Battle."

the U.S. should go on the offense as early as possible to end the battle on U.S. terms using joint Air Force and Army operations.[14] Unlike the active defense, this doctrine was not limited to the European theater of operations. AirLand Battle was based on four primary concepts: defeating the enemy rapidly during initial contact, utilize deep attacks to force the enemy's follow on echelons to deviate from their plans, take and maintain the initiative, and all actions by a commander should be focused on collapsing the enemy's ability to fight.[15] "It primarily relied on airpower with interdiction but included long range artillery, special forces, airborne, and air mobile air/assault units."[16]

The 1982 update of FM 100-5 formally replaced the active defense with AirLand Battle. The offensive techniques relied on exploiting positions of advantage to avoid an enemy's strengths and target the weaknesses to destroy his ability to fight. The new defensive techniques provided flexibility based on the operational environment and allowed a commander to defend forward, in depth, or in strong points.[17] Another key aspect of this new doctrine is that it recognized the critical link between tactics and sustainment that reflected the maxim that what cannot be supported logistically could not be accomplished tactically.[18]

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[14] Romjue, "Active Defense to AirLand Battle."

[15] Ibid.

[16] Douglas Skinner, "AirLand Battle Doctrine." (Office of Naval Research, Department of the Navy, Arlington, VA, 1988), 32.

[17] Romjue, "Active Defense to AirLand Battle."

[18] Headquarters, Department of the Army (HQDA), Field Manual (FM) 100-5, *Operations* (Washington, DC: Government Printing Office, August 1982).

The concepts of the "deep battle area" and "deep attack" greatly increased the commander's geographic scope of operations. The corps commander was required to be able to effect targets in an expanded area of influence up to 150 kilometers beyond the forward line of troops, and had to plan for enemy forces in an area of interest up to 300 kilometers forward.[19] "Deep attack was not a luxury, but an absolute necessity to winning. The deep attack and close-in battles were to be fought as all one battle."[20] This reflects a reality of modern maneuver warfare that to defeat an enemy a military must target logistics, sustainment, and follow-on combat forces well beyond the front lines in the deep battle area. The deep attack concept would enable U.S. forces to decisively defeat forward and rear enemy units simultaneously to force them to culminate before they could reach their objectives. AirLand Battle doctrine was trained and implemented through the remainder of the Cold War and was eventually proven to be an effective concept with the decisive victory over the Iraqi military in Operation Desert Storm.

After Desert Storm, the Army was committed to stability and civil support operations in Somalia, Bosnia, Kosovo, and other nations. Simultaneously, the fall of the Soviet Uniont resulted in a large drawdown of the Army in the 1990s because there was no peer military that posed a threat to the U.S. or its allies. The Army transitioned from being a force physically present in Europe to counter the Soviet invasion of Germany to an Army based on force projection. Despite the changes in operational deployments, the Army's structure of the 1990s was still based on the AirLand Battle concept of the Cold

[19] HQDA, FM 100-5 (1982).

[20] Romjue, "Active Defense to AirLand Battle," 44.

War, which meant the military training was not prepared to conduct operations below the threshold of LSCO.

A solution to this problem was creating a modular force. ". . . modularity is a force design methodology which establishes a means of providing force elements that are interchangeable, expandable, and tailorable to meet the changing needs of the Army."[21] Modularizing the Army created the BCT, which is the most basic deployable maneuver unit. The BCTs possess units from all the WFFs, enabling them to operate independently from a parent division. The three types of BCTs that were created were armored, Stryker, and light infantry.[22]

The creation of the BCT caused the deactivation of traditional units, such as the division Military Intelligence (MI) battalions and placed most of the intelligence soldiers and equipment in the BCT Military Intelligence Companies (MICOs). By deactivating units like the divisional MI battalion, the Army was able to use their billets to create the MICOs and more BCT headquarters elements.[23] The Army also grew the size of the functional brigades for the Corps so they could also serve as force providers to the BCTs. Using the MI example, the battlefield surveillance brigade was an independent corps brigade that provided tailorable packages of trained and equipped intelligence soldiers to

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[21] U.S. Army Training and Doctrine Command (TRADOC), *Task Force Modularity, Army Comprehensive Guide to Modularity* (Fort Monroe, VA: TRADOC, 2004).

[22] Ibid.

[23] U.S. Army Intelligence Center of Excellence (USAICoE), "Expeditionary Military Intelligence Brigade (E-MIB) Force Design Update (Draft)," (Organizational Design Paper, USAICoE, Fort Huachcua, AZ, June 2019).

the BCTs to support their additional intelligence requirements. BCTs became the Army's primary unit of action for the COIN operations in Afghanistan and Iraq, while divisions became operational level headquarters over large geographic areas.[24]

The battlefield surveillance brigade transformed into the Expeditionary MI Brigade (E-MIB), which was designed to conduct multi-disciplined intelligence operations to support unified land operations. The E-MIB's subordinate battalions were designed to be allocated to a division or corps headquarters to enhance their information collection and analysis requirements. Modularization was successful in allowing the BCTs to conduct COIN in Iraq and Afghanistan, but it also led to the current challenges identified in the LSCO Gap Study. A 2019 organizational design paper written by the United States Army Intelligence Center for Excellence defines the problem.

> The division staff lacks the analytic, PED and deep sensing capability and capacity to provide multi-domain intelligence support to division level shaping and strike operations during large scale ground combat. The division G2 staff was significantly reduced for the same reasons it was reduced at corps level. About 25% of the remaining personnel were further moved to a supporting [Reserve Component main command post operational detachments], a higher percentage than the corps. The former divisional MI [battalions] were used to build the current day BCT MICO which is largely optimized for limited contingency operations.[25]

The flexibility to tailor force packages for individual units based on their deployment location proved to be a successful model for the COIN environment, which has enabled modularization to remain a prominent component of the Army's sustainable

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[24] Kyle Rempfer, "Army's New Chief Looks to Prep the Force for Large-Scale Combat," *Army Times,* 20 September 2019, accessed 22 September 2019. https://www.armytimes.com/news/your-army/2019/09/20/armys-new-chief-looks-to-prep-the-force-for-large-scale-combat/.

[25] USAICoE, "E-MIB Force Design Update (Draft)."

readiness plan. However, without changing the current intelligence organizations and developing new materiel solutions, the Army will not be able to close the LSCO Gap One. If prevailing in LSCO is a priority for the Army, force management changes must occur.

Research Questions

The primary research question of this thesis is: Do the active duty Army divisions need an organic MI battalion added to their force structure to collect information in the division deep area? The division deep area is where the division commander . . . "sets conditions for future success in close combat."[26] The purpose of this research is to address capability gaps and provide recommended solutions. This question is supported by several secondary research questions designed to answer the main thesis question.

The first secondary question is: How did the Army's now deactivated divisional MI battalions historically support the divisions? This question will examine the requirements that drove the creation of these organizations, if those requirements are like those today, and how the organizations supported the divisions in the Airland Battle doctrine. It will also discuss the structural challenges and limitations the battalions faced and analyze if they can be mitigated in today's Army.

The second secondary question is: Can a minor growth to the E-MIBs provide the support to each division fill the capability gap? This examines the current structure of the E-MIB and would propose a minor change to the force structure to provide each division

[26] Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 3-0, *Operations* (Washington, DC: Government Printing Office, July 2019), 4-4.

at least a company sized element to support its LSCO requirements. If it is determined the E-MIBs cannot support the divisions with a company, then it will identify the specific shortfalls to examine if a battalion size element can fulfill the requirement.

The third secondary question is: Do the current conceptual organizational changes to the E-MIB fill LSCO Gap One? This question analyzes the strengths and weaknesses of the current proposed changes to the MI force structure to determine if it satisfies the requirement without creating organic MI battalions within the division. This question will also analyze the benefits and constraints with having an independent MI battalion allocated to, but not part of an Army division.

Assumptions and Limitations

This research relies on four key assumptions. The first assumption is that the Army will develop and field materiel solutions that provide the technical means to collect information in the division and corps deep areas. The second assumption is that the historic divisional MI battalions serve as valid case studies for today's Army. While there are similarities in Airland Battle and current LSCO doctrine, there is a thirty-year technology gap that has changed the dynamics of modern warfare. The third assumption is that any emerging technology will require the same number of soldiers to operate it as required with the current platforms. This means that the number and rank of soldiers who operate the current pieces of information collection equipment will be the same as any new systems. For example, a new SIGINT platform will require the same number of soldiers to operate it as its future replacement. The final assumption is that the newly activated V Corps headquarters will only be a command and control headquarters for NATO operations and will not be allocated organic subordinate units.

This research is limited in its scope and will primarily focus on the active duty Army. The requirements of Army National Guard (ARNG) and U.S. Army Reserve (USAR) units will be analyzed when appropriate, but the primary focus is the force design of the active component. This study relies on the emerging organizational and materiel development concepts to reach informed conclusions. The concepts used may be pre-decisional, which means that they may be altered in the future or cancelled altogether.

CHAPTER 2

LITERATURE REVIEW

The literature review is separated into three parts. The first part presents a broad overview of the historical accounts and significant literature on the creation, roles, and utility of the divisional MI battalions. The primary focus of this section are the roles and responsibilities of the MI battalion, how the divisions utilized them, and the challenges they faced during their lifespan. The second section examines the current environment in relation to doctrine and policies that explain the Army's roles in the intelligence WFF, as well as the roles and responsibilities of MI personnel. Analyzing the current environment will assist in identifying how the intelligence WFF is expected to operate and will further discuss the limitations of the current force structure. The third section is an overview of the emerging concepts that are being developed to close the deep sensing capability gap. The aim of this section is to examine theoretical solutions to filling the intelligence capability gaps so they can be further analyzed.

History of the Divisional MI Battalion

The sources used this section consist of scholarly articles in military publications, official historical documentaries, monographs from the U.S. Army School of Advanced Military Studies, and papers from the U.S. Army War College. These references rely heavily on first person accounts, doctrine, and official lessons learned to generate the body of their works, and to help inform the analysis. While generally members of the military, students from these institutions conduct independent research and their findings and recommendations reflect their own views.

In the 1960s, the Army shifted its priorities from defending Western Europe to fighting the war in Vietnam. The MI units transitioned from focusing on the Soviet threat to acquiring information about the Viet Cong insurgency and the North Vietnamese Army.[27] New equipment, doctrine, and training were created to address this concern to support force protection and defeating the enemy. After Vietnam, the Army realized that rapid changes needed to occur to leverage intelligence assets against the Soviet Union. This shift in priorities from winning against a peer threat to COIN, and then back to fighting a peer threat parallels the current environment. For this reason, this section will begin its analysis in the post-Vietnam War era, where the U.S. Army realized it must fill the collection gap against a peer or near-peer adversary.

The 1973 Arab-Israeli War was a wakeup call for the Army Intelligence Corps because the U.S. did not have the SIGINT and EW capabilities the Israeli's used against the Arab armies.[28] Joint Publication 2-0 defines SIGINT as, "A category of intelligence comprising either individually or in combination all communications intelligence, electronic intelligence, and foreign instrumentation signals intelligence, however transmitted."[29] Army Doctrine Publication (ADP) 1-02 defines Electronic Warfare (EW)

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[27] John P. Finnegan, and Romana Danysh, *Army Lineage Series: Military Intelligence* (Washington, DC: Center of Military History, United States Army, 1998).

[28] Don E. Gordon, "The CEWI Battalion: A Tactical Concept That Works," *Military Review* 60, no. 1. (January 1980): 3-12.

[29] Joint Chiefs of Staff (JCS), Joint Publication (JP) 2-0, *Joint Intelligence* (Washington, DC: Government Printing Office, October 2013), GL-11.

as, “Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy.” [30]

Intercepting, locating, and jamming signals was a cornerstone of EW since before World War One.[31] Despite the rapid changes in technology, the Army maintained an EW and intelligence structure similar to what it had in World War Two where intelligence teams were provided to divisions and placed under the control of the G2.[32] The 1973 edition of FM 30-5, *Combat Intelligence*, recognized that combat forces needed intelligence support, but did not require intelligence collection assets to maneuver on the battlefield with these units.[33] This created a noticeable gap between U.S. and Israeli doctrine because the Israeli’s maneuvered their collection assets on the battlefield to directly support the ground commander.

> As a result, in December 1974 the Army Chief of Staff directed the Intelligence Organization and Stationing Study (IOSS). IOSS would consolidate and integrate all military intelligence and [EW] functions so that each division and corps would have its own organic [Combat Electronic Warfare Intelligence] unit.[34]

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[30] Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 1-02, *Terms and Military Symbols* (Washington, DC: Government Printing Office, August 2018).

[31] Kelly, “The Electronic Pivot to Maneuver.”

[32] Thomas H. Felts, “Building a Tactical Intelligence Model for the Information Based Force,” (Monograph, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, KS, 18 December 1997).

[33] Headquarters, Department of the Army (HQDA), Field Manual (FM), 30-5 *Combat Intelligence* (Washington, DC: Government Printing Office, October 1973)

[34] Felts, “Building a Tactical Intelligence Model.”

The Combat Electronic Warfare Intelligence (CEWI) units were the first Army intelligence organizations to be listed on the table of organization and equipment, which provided a required wartime mission, organizational structure, and personnel and equipment listing.[35] The addition of intelligence collection assets to the table of organization and equipment was a paradigm shift in that it lifted the secrecy behind tactical information collection by formally assigning these capabilities within the units they supported. This enabled EW and SIGINT units to be a permanent part of Forces Command (FORSCOM) in the corps and division for the first time in order to integrate intelligence with the battlefield maneuver plan. This force management change was followed by the 1976 publication of FM 100-5 that stated that EW units should be positioned with the forward forces to coordinate with maneuver and fires to support the active defense.[36]

FM 100-5 served as the primary doctrinal tool for explaining how the new intelligence units would support the tactical commander and was the basis the foundation for the future implementation of CEWI within the Army divisions and corps. The new doctrine also served as the justification for developing new systems that were designed to collect SIGINT against the Soviet military to assist the commander in locating enemy forces. Figure 1 describes the structure of the CEWI battalion, and depicts the new capabilities provided to each Army division.

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[35] Finnegan and Danysh, *Army Lineage Series: Military Intelligence*.

[36] Headquarters, Department of the Army (HQDA), Field Manual (FM) 100-5, *Operations* (Washington, DC: Government Printing Office, July 1976).

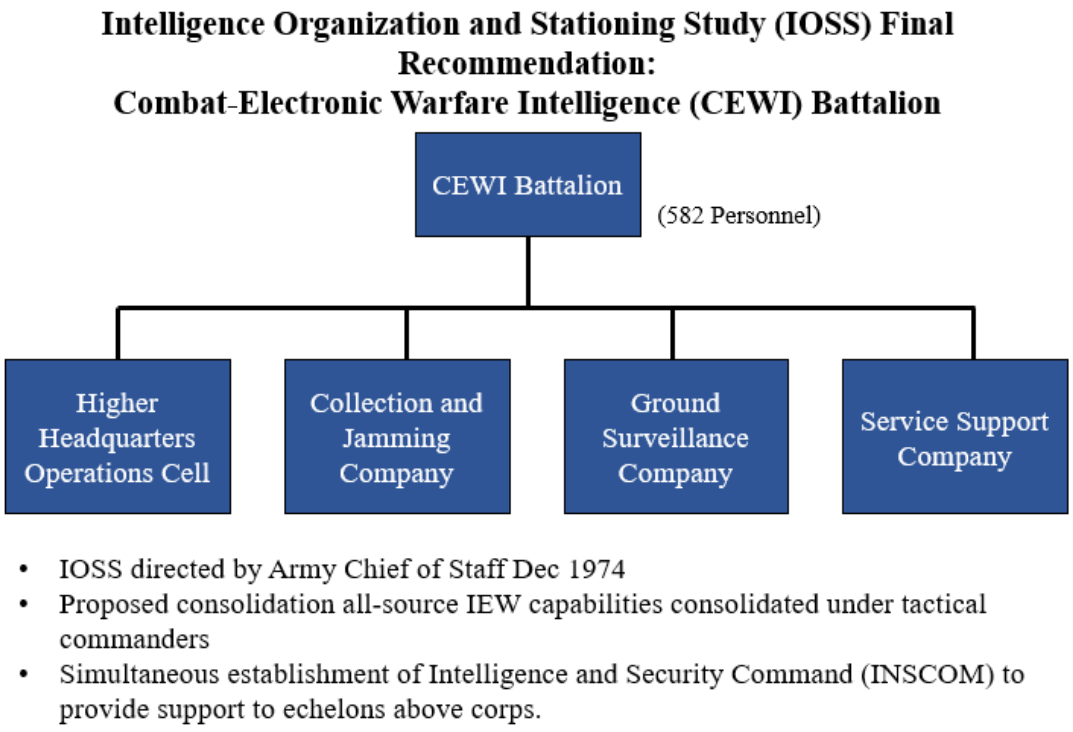

Figure 1. Intelligence Organization and Stationing Study (IOSS) Recommendation

Source: Created by author with information from Sidney T. Weinstein, *Evolution of Military Intelligence, 1944-1984* (Fort Huachuca, AZ: U.S. Army Intelligence Center and School, 1984).

Lieutenant Colonel (LTC) Don Gordon commented in his 1980 article in *Military Review* that the CEWI units were assigned to, and trained with, the division in which it would fight the next war. This dynamic exposed the division and brigade staffs to the CEWI battalion's technical capabilities, and taught commanders how to integrate intelligence and EW into the battle plan.[37] It also provided brigade and division

[37] Gordon, "The CEWI Battalion."

commanders with more thorough intelligence and reporting than they previously had.[38] Nonetheless, one of CEWIs largest challenges was that while the CEWI battalions participated in divisional training, many G3s still did not understand how to utilize this unit to support operations, and therefore would often delegate implementing the unit to the G2.[39] While the presence of the CEWI battalions did help the tactical force gain an understanding of the intelligence WFF, the complexities involved with using the new units served as a barrier to maximizing their potential.[40]

The emergence of AirLand Battle doctrine in the early 1980s required the Army to fight in the deep and close areas, which was in stark contrast to the active defense the CEWI battalions were designed to support. LTC Leonard Nowak identified in his 1987 article in *Military Review* that the fielding of the Abrams tank, Bradley fighting vehicle, and multiple launch rocket system artillery created a force of fast and maneuverable vehicles that could engage an adversary at a much greater distance than their predecessors.[41] The designers of CEWI did not forecast the coming technological revolution and the doctrinal changes that would come from it. They created units that could fight the 1973 Arab-Israeli War, and not the U.S. Army's next war. The advent of the materiel developments supporting AirLand Battle meant that the vehicles issued to the CEWI battalions would have trouble keeping up with the maneuver forces, and

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[38] Gordon, "The CEWI Battalion."

[39] Ibid.

[40] Ibid.

[41] Leonard G. Nowak, "Division Intelligence: Left in AirLand Battle's Dust?" *Military Review* 62 (November 1987): 52-59.

therefore risked becoming irrelevant on the battlefield.[42] In armored divisions, the maneuver forces would operate out of tracked vehicles, yet the MI units were generally issued wheeled vehicles that were more limited on open terrain. The Army created CEWI to fill an intelligence gap, but its designers did not forecast how other emerging equipment that influenced the maneuver force could recreate that gap.

In his 1993 monograph, Major Patrick Kelly analyzed the CEWI battalions' first experience in combat. Operation Desert Storm was the trial by fire for these units, but any analysis of their performance must consider that there was a lack of any credible threat of enemy airpower. The U.S. Army was joined by a vast coalition fighting the Iraqi Army, not the Soviets in Europe. Though the CEWI battalions were not fielded fast, maneuverable, and defensible vehicles that could maintain speed with the Bradley, they were able to intercept and locate Iraqi transmissions throughout the campaign.[43] The success of the CEWI battalions was due to the skill of the intelligence soldiers in their tradecraft, and in the ability to maneuver in synchronized operations with their organic divisions. When these units crossed the line of departure into Iraq, they transitioned from following intelligence doctrine to following maneuver doctrine to better support their commanders' requirements.[44]

This identifies two critical points for the successful intelligence support to maneuver commanders. First, MI units maneuvering on the battlefield in support of a

[42] Nowak, "Division Intelligence."

[43] Kelly, "The Electronic Pivot to Maneuver."

[44] Ibid.

division must have opportunities to train with the division headquarters and its subordinate brigades. Second, MI soldiers must be proficient using their equipment because their technical skills are critical for them to be able to adapt to situations on the battlefield. The transition from following MI doctrinal techniques and procedures to the commander's scheme of maneuver was critical to reaching the mission objectives because they were able to place themselves where they needed to be to collect the information for the commander. If they had only followed the MI doctrine, the CEWI units may not have been able to adapt to the changing operational environment and become ineffective.

Major George Franz identified in his 1996 monograph that despite this overall success, heavy divisions were not capable of providing effective collection management of their collection assets due to the division G2's and CEWI battalion's organizational structure.[45] JP 2-0 defines collection management as, ". . . the process of converting intelligence requirements into collection requirements, establishing priorities, tasking or coordinating with appropriate collection sources or agencies, monitoring results, and re-tasking, as required."[46] "Division level intelligence staffs were not manned nor equipped to adequately conduct intelligence exploitation operations."[47] Additionally, the division G2s and MI battalions were physically separated, which prevented synchronizing and

[45] George G. Franz, Beyond Desert Storm, "Conducting Intelligence Collection Management Operations in the Heavy Division" (Monograph, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, KS, 14 December 1995).

[46] JCS, JP 2-0.

[47] Franz, "Beyond Desert Storm," 3.

coordinating collection efforts. The necessity to maintain operational security and prevent the Iraqis from locating American forces prior to the invasion on the western flank prohibited SIGINT sensors from deploying to the front lines to begin collection until the ground combat started.[48]

The CEWI's success maneuvering on the battlefield was marginalized by the fact that they could not collect information until the ground attack started and that the divisions could not process or exploit information provided to it in a timely manner that kept up with the rapid advance. The collection manager at the division is responsible for tasking the collection platforms to answer requirements and must be able to communicate changes to their collection plan. In this study, the collection manager did not have full control over the collection assets and had to go through the CEWI battalion to coordinate the placement of assets.[49] This meant that a division staff officer who maintained a high level of situational understanding had to coordinate with a battalion staff, and then wait for a battalion commander to approve the request, in order to place collection assets where they were need on the battlefield.

After Desert Storm, the MI battalions and the division G2 sections were restructured to create the analysis control element, which was designed to conduct and coordinate the divisional intelligence plan and Intelligence and Electronic Warfare (IEW)

[48] Center for Army Lessons Learned (CALL), "U.S. Army Operation Desert Shield/Desert Storm Observation Worksheets" (Historical Archives, U.S. Army Combined Arms Command Center, Fort Leavenworth, KS, 1991).

[49] Franz, "Beyond Desert Storm."

operations.[50] This organizational change was designed to mitigate the issues in re-tasking assets that Franz noted in his monograph. This section filled the gap at the division level by providing a dedicated section to process and analyze information and create intelligence products for the division and brigades. The analysis control element served as the link between the sensors and the collection manager to provide the constant update of the common operating picture.

The tenure of the CEWI battalions showed that properly trained intelligence units organic to the division could provide support in large scale combat. Despite this overall success, there were inherent flaws in its design. In his 1999 monograph, Major David Ward identified that the structure of the CEWI battalion in the division created a leadership problem in that the G2 and the CEWI commanders were both LTCs. This sometimes led to situations of conflict between the two individuals because of personality differences, and while they were the same rank, one person inevitably outranked the other.[51] FM 34-1 listed parallel responsibilities between the G2 and the battalion commander and did not clearly define each position's roles and responsibilities.[52] The G2 was not a commander and focused on supporting the division's intelligence operations. Likewise, the MI battalion commander was not the G2 and needed to provide

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[50] Franz, "Beyond Desert Storm."

[51] David L. Ward, "Does the U.S. Army Still Need a Military Intelligence Battalion Commander and a G2 in a Heavy Division," (Monograph, School of Advanced Military Studies United States Army Command and General Staff College, Fort Leavenworth, KS, 16 December 1998).

[52] Headquarters, Department of the Army (HQDA), Field Manual (FM) 34-1, *Intelligence and Electronic Warfare Operations* (Washington, DC: Government Printing Office, September 1994).

forces to support the division's operations. A single individual cannot accomplish both roles, and without the MI battalion commander, the G2 would not be able to focus on plans and staff operations.[53]

The 2003 invasion of Iraq marks the last time the divisional MI battalions engaged in ground combat against a near-peer threat and is documented in several official historical summaries commissioned by the Department of Defense. At the outset of the war, the MI battalions were primarily made up of SIGINT and imagery intelligence, which were designed to collect and distribute information against Russian based systems.[54] The units were effective in collecting key information about the composition and disposition of the Iraqi Army except, like in Desert Storm, the rate of advance was too fast for the intelligence sections to disseminate the intelligence to the subordinate units in a timely manner.[55]

> 'The rate of advance was much too fast for the divisional [communications] to deal with. This hindered the ability to get intelligence products down to lower levels and for lower levels to pass their information up the chain of command.' This applied equally to the Army's [all-source analysis system] generated [common operating picture]. An inability to disseminate the [common operating picture] in a timely manner also contributed to the digital divide.[56]

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[53] Ward, "Does the U.S. Army Still Need a Military Intelligence Battalion."

[54] Gregory E. Fontenot, E. Degan, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom* (Washington, DC: Combat Studies Institute Press, 2004).

[55] Walter L. Perry, Richard E. Darilek, Laurinda L. Rogh, and Jerry M. Sollinger, *Operation Iraqi Freedom: Decisive War, Elusive Peace* (Santa Monica, CA: RAND Corporation, 2015).

[56] Ibid., 277.

The Army intelligence structure was designed to aid the commander in visualizing the battlefield by identifying threat locations and vulnerabilities; which enabled the commander to apply combat power to those vulnerabilities to defeat the adversary.[57] Intelligence facilitated operations, and while information collection supported operations, gathering information in itself was not the main objective.[58] This changed after the defeat of the Republican Guard and the capture of Baghdad. The Iraqi military had been defeated and there was no longer a need to collect tactical information against enemy units in the field using military equipment.

The rise of the various insurgent groups in Iraq required a bottom up collection approach where Human Intelligence (HUMINT) was the primary means to gain actionable intelligence. Up until this point the Army had used a top down approach, where higher echelons would collect information and disseminate intelligence to their subordinate units. This proved to be a paradigm shift in that the MI battalions were not structured to support full spectrum operations because only 25 percent of the soldiers were HUMINT.[59] The Army found itself in a position where it was capable of collecting against an adversary in LSCO, but was lacking the personnel to conduct information in operations below the threshold of LSCO. Individual units began conducting their own

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[57] Donald P. Wright, and Timothy R. Reese, *On Point II. Transition to a New Campaign: The United States Army in Operation Iraqi Freedom May 2003-January 2005* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008).

[58] Ibid.

[59] Ibid.

forms of HUMINT collection with their regular soldiers because that was the only way to gather information.

> This development ran counter to doctrine, and MI professionals expressed concern about the lack of specialized training within the infantry, armor, and other battalions that were busy creating their own intelligence. However, tactical commanders had little choice. They and their soldiers lived and operated in their assigned areas of responsibility and required accurate and timely information if they were to achieve their objectives, which meant, after the summer of 2003, engaging a growing insurgency.[60]

To address this problem, divisions and brigades created G2X and S2X positions in their staffs. The S2X formalized the process and coordinated the collection and analysis of HUMINT, enabling the maneuver battalions and brigades to gather information directly from the local population to generate intelligence. This bottom up approach enabled the units to maintain a common operating picture and situational understanding in ways the SIGINT and imagery intelligence sections never could in a COIN environment.[61] The units in Iraq achieved some success with this structure, and the units rotating into theater in 2004 used this model within their intelligence sections.

The Army realized that its force structure was not conducive to sustained COIN operations and it pushed to rapidly change towards modularization. The divisional MI battalions would traditionally provide one MICO as general support to each brigade, but this new environment necessitated a different type of intelligence support to the BCTs.[62] This requirement was a driving factor for the deactivation of the divisional MI battalions

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[60] Wright and Reese, *On Point II,* 191-192.

[61] Ibid.

[62] Felts, "Building a Tactical Intelligence Model."

to create the organic MICO to each BCT. This change to the Army's force design allowed BCTs to gather intelligence at the lowest levels, process and analyze it, and then distribute it upwards to the division headquarters. The divisions would receive intelligence summaries from each subordinate unit, which helped generate a more holistic understanding of the operational environment.[63]

The Army's modularization represents a paradigm shift in training and managing intelligence soldiers. Under the current structure, there is no separate entity within the division hierarchy to manage training for the MICO. The company commander is required to train the soldiers of the MICO, with the assistance the Brigade Engineer Battalion commander and S3, the BCT S2, and division G2. This has formed an environment where the most experienced intelligence officer in the division has no formal responsibility to manage the intelligence force providers and is relegated to an advisory role. By nature, the captain commanding the MICO does not have nearly the same experience as a LTC, nor does he have a MI battalion staff to rely on to support training. The Expeditionary Military Intelligence Battalions (E-MIBNs) in the E-MIBs are the only FORSCOM MI collection units with similar staffs and training management capabilities to those of the CEWI battalions. The E-MIBNs do not have a formal role in training the MICOs, creating a situation where they could be more proficient in their intelligence skills than the MICOs.

The available literature that describes the history of the CEWI battalions shows a mixture of results. The battalions were created to fill a capability gap while the Army was

[63] Wright and Reese, *On Point II*.

shifting its priorities to facing the Soviet threat, only to be challenged by outdated vehicles when new materiel acquisitions that supported AirLand Battle were fielded. While the CEWI battalions experienced challenges, their capabilities greatly assisted the division commanders in combat by providing tactical intelligence in two wars. This proves that the battalion provided a necessary and unique capability to the maneuver force that would otherwise not have been available. With the CEWI battalions were deactivated the Army assumed risk by recreating that capability gap at the division level to support the BCTs in COIN.

Current Doctrine

Doctrine is considered the professional body of knowledge for the Army and assists soldiers with how to perform their assigned tasks. As official publications, doctrine is arguably one of the strongest sources for scholarly research to explain the military. The U.S. Army defines doctrine as,

> fundamental principles, with supporting tactics, techniques, procedures, and terms and symbols, used for the conduct of operations and as a guide for actions of operating forces, and elements of the institutional force that directly support operations in support of national objectives. It is authoritative but requires judgement with its application.[64]

The Army's primary publications for operations are ADP 3-0, published in July 2019, and FM 3-0 published with Change One in December 2017. These two publications are the foundation for the Army's tactical doctrine and describe how the Army will fight against peer and near-peer threats and focuses on LSCO and Multi-

[64] Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 1-01, *Doctrine Primer* (Washington, DC: Government Printing Office, July 2019), 1-2.

Domain Operations (MDO). The publications emphasize the Army maneuvering on the battlefield and preparing for LSCO across the six WFFs of command and control, movement and maneuver, intelligence, sustainment, protection, and fires. These publications add the terms "close area," "deep area," "support area," and "consolidation area" to the Army lexicon. These four areas describe the physical arrangement of forces in time, space, and purpose where a commander will conduct decisive, shaping, and sustaining operations.[65]

LSCO Gap One identifies that the army lacks a deep sensing capability that can collect on an adversary in the deep area.

> Operations in the deep area involve efforts to prevent uncommitted or out of contact enemy maneuver forces from being committed in a coherent manner or preventing enemy capabilities, such as fires and air defense, from creating effects in the close area. A commander's deep area generally extends beyond subordinate unit boundaries out of the limits of the commander's designated [area of operations]. The purpose of operations in the deep area is to set the condition for success in the close area or to set the conditions for future operations.[66]

While units, such as BCTs fight the enemy in the close area, the division will continuously shape conditions in the deep area for the future fight. Though there are similarities with the deep area and the AirLand Battle deep battle concept, targets in the deep area are not required to be engaged simultaneously with those in the close area. Simultaneous engagement of the enemy in the deep and close area is necessary when the situation prescribes it and is not a requirement for success. This provides the commander

[65] HQDA, FM 3-0.

[66] Ibid., 1-34.

greater flexibility when engaging an enemy and allows him to seize the initiative when conditions are right.

FM 3-0 explains a division's task organized structure for combat operations in LSCO. "There is no standard configuration for a division, but a division will require a [combat aviation brigade], an E-MIB, division artillery , [maneuver enhanced brigade], brigade engineer battalions, and a sustainment brigade to provide the base capabilities necessary for the conduct of LSCO."[67] A division headquarters is designed to command the operations of two to five BCTs, and are traditionally task organized with a mixture of infantry, Stryker, and armor BCTs.[68] With no organic MI units besides the MICO, the division receives reinforcing support from the E-MIB that is tailorable to the situation and mission requirements.[69]

Intelligence is one of the six Army WFFs and is closely linked with operations. The Army's primary publications for intelligence are ADP 2-0, published in July 2019, and FM 2-0, published in July 2019. ". . . intelligence supports joint and Army operations across unified action, the Army's strategic roles, unified land operations, and decisive action at each echelon. . . ".[70] The publications address the challenges of LSCO and explain how intelligence personnel must operate from positions of relative advantage.

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[67] HQDA, FM 3-0.

[68] HQDA, ADP 3-0.

[69] Headquarters, Department of the Army (HQDA), Field Manual (FM) 2-0, *Intelligence* (Washington, DC: Government Printing Office, July 2018).

[70] Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 2-0, *Intelligence* (Washington, DC: Government Printing Office, July 2019), vii.

"Intelligence is complex, and a peer threat can counter Army forces' intelligence efforts. To achieve situational understanding against a threat, friendly forces must strive to identify or open windows of opportunity across domains."[71] The publications identify that the intelligence community was primarily conducting passive collection during counterinsurgency, but that has to change to proactive collection and analysis to fight for intelligence against an enemy's efforts to deny information collection to win in LSCO. These publications represent a dramatic shift in the mentality of the Army intelligence corps by recognizing that this WFF will operate in a competitive environment, and that an adversarial force will attempt to limit the U.S.'s ability to gain an information edge.

FM 2-0 defines the Intelligence Warfighting Function as, ". . . the related tasks and systems that facilitate understanding the enemy, terrain, weather, civil considerations, and other significant aspects of the operational environment."[72] The operational environment is defined by the physical, military, economic, social, information, infrastructure, physical environment, and time. This is used to analyze the mission variables of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations.[73] The MI WFF applies these variables to identify information gaps, and then develops a method to collect information on these gaps with reconnaissance, surveillance, security, and intelligence operations. The intelligence WFF

[71] HQDA, FM 2-0, viii.

[72] Ibid., 1-3.

[73] Ibid.

tasks are to provide intelligence support to force generation, situational understanding, information collection, targeting, and information capabilities.[74]

Army intelligence doctrine recognizes that peer and near-peer adversaries will use deception and other means to confuse or mislead intelligence collection efforts. As adversaries gain technological parity with the U.S., it will become more difficult to gather information through passive surveillance.[75] To combat this, FM 2-0 recognizes that the intelligence WFF must diligently plan operations to support the maneuver plan to help gain the initiative in conflict. "Fighting for intelligence encompasses the basics of establishing an effective intelligence architecture, synchronizing the intelligence WFF, and planning and conducting information collection."[76]

Under the current doctrine, the division G2 is the senior intelligence officer in the division and is the principle intelligence advisor to the division commander.[77] The G2 section consists of the division intelligence cell, which assists commanders ". . . to understand the enemy and other threats, terrain and weather, and civil considerations."[78] The intelligence cell consists of the G2 analysis control element, the G2X, and the

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[74] HQDA, ADP 2-0.

[75] Curtis D. Taylor, "The Transformation of Reconnaissance: Who Will Fight for Information on the Future Battlefield?" (Master's Thesis, United States Army Command and General Staff College, Fort Leavenworth, KS, 17 June 2005).

[76] HQDA, FM 2-0, 6-1.

[77] Ibid.

[78] Ibid., 4-11.

intelligence operations section. The division G2 has specific operational responsibilities in LSCO.

> To support operations, the division intelligence cell receives, processes, and analyzes information from all sources to produce and disseminate intelligence. Provides intelligence to support current and future operation activities. Develops information collection requirements and synchronizes intelligence operations.[79]

The BCT is the Army's primary close combat force that is tasked with closing with and destroying an enemy. The BCT S2 is the principal intelligence advisor to the commander and manages the BCT's collection and analysis efforts. To support this, "BCT intelligence assets from the MI Company are employed to support mission command by meeting the BCT commander's information collection tasks."[80] During operations, the MICO becomes operationally controlled by the BCT S2, and is organized to support the BCT's collection and analysis efforts based on mission requirements. The soldiers and equipment of the MICO make up the BCT's brigade intelligence support element, SIGINT cell, Geospatial Intelligence (GEOINT) cell, tactical Unmanned Aerial Systems (UAS), and HUMINT cell. If required, elements of the MICO can be further task-organized to support other units within the BCT to fill collection and analysis gaps.[81]

"An E-MIB is an information collection organization designed to augment the corps and division capability to PED national and joint force SIGINT and GEOINT. E-

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[79] HQDA, FM 2-0, 4-11.

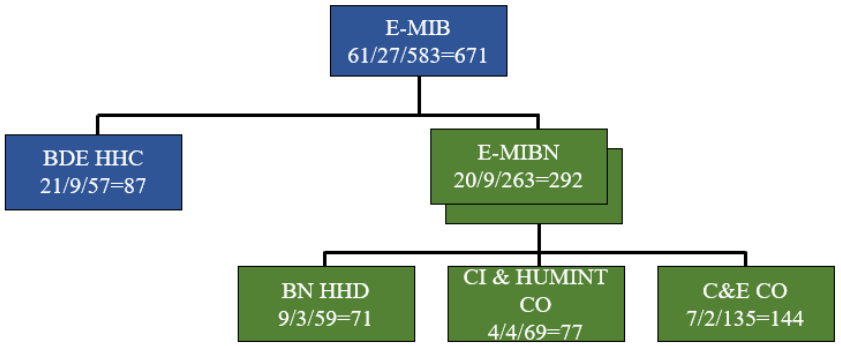
[80] Ibid., 4-13.

[81] Ibid.

MIBs also provide Counterintelligence (CI), HUMINT collection, and ground-based SIGINT collection to the corps and division."[82] The E-MIB supports the division and corps operational requirements, which may include being a force provider for BCTs. The E-MIB does not deploy as an independent unit and instead supports the corps' and divisions by deploying tailorable force packages to meet mission requirements.[83] The E-MIB, shown in Figure 2, consists of a brigade headquarters, and two E-MIBNs. Each battalion consists of a headquarters detachment, a CI and HUMINT Company, and a Collection and Exploitation (C&E) Company. The C&E Company is designed to collect information and conduct PED of SIGINT, HUMINT, and GEOINT to support the all-source intelligence picture.

[82] Headquarters, Department of the Army (HQDA), Army Technical Publication (ATP) 2-19.3, *Corps and Division Intelligence Techniques* (Washington, DC: Government Printing Office, March 2015).

[83] Ibid.



Teams (Capability)	Per E-MIB	Total Active Duty Capacity
CI Teams	8	24
Interrogation Platoons	2	6
Multifunction Teams	8	24
PED Platoons	6	18
TGS/PED Platoons	2	6
Total Personnel	671	2013

Figure 2. The Expeditionary Military Intelligence Brigade

Source: Created by author using information from Force Management Website, U.S. Army, 16 October 2019, accessed 26 February 2020, https://fmsweb.fms.army.mil/protected/secure/tools.asp.

Training and Doctrine Command Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, provides the concept for how the Army will solve the problem posed by peer and near-peer adversaries across the domains of space, cyberspace, land, sea, and air. This pamphlet is the Army's conceptual primer for MDO, and defines the challenges of facing Russia, China, and other nations in LSCO. It defines the responsibilities and scope of the echelons from the field Army to the brigade level. The corps, ". . . conducts intelligence analysis to converge national, theater, and organic Intelligence, Surveillance, and Reconnaissance (ISR) collection to support tactical ground

objectives."[84] It then states that the division, ". . . has the analytical capacity to converge limited amounts of national- or theater-level intelligence sources with its organic ISR.'[85] The difference in scope is because the E-MIB is inherently a corps asset that can have tailored packages allocated to support a division. There are currently three E-MIBs and six E-MIBNs on active duty, and they are required to support the intelligence operations for three corps and ten divisions. In a LSCO environment, there is not enough E-MIB support for the active army based on doctrinal guidelines.

The current structure and doctrine provide limited instruction for how to collect information in the division deep except for utilizing the only organic collection capabilities for the division, the Gray Eagle UAS Company. The equipment and capabilities organic to the Army divisions have not caught up to the concepts of collection in the deep area. The Gray Eagles have the capability to provide persistent ISR and target acquisition to provide similar information collection to traditional ground reconnaissance. However, UASs are susceptible to common anti-aircraft weapons found in near-peer militaries, which means their capabilities will likely be degraded in LSCO. Without E-MIB augmentation, there are no SIGINT, GEOINT, or HUMINT collection assets for the division headquarters to provide indications and warnings intelligence about a peer adversary.

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[84] U.S. Army Training and Doctrine Command (TRADOC), TRADOC Pamphlet (PAM) 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Washington, DC: Department of the Army, December 2018), 23.

[85] Ibid.

Emerging Concepts and Capabilities

The sources used in this section consist of articles in military journals, information papers designed to inform senior leaders, presentations used to inform the military community, and an organizational design paper that was drafted to reflect possible changes in the military force structure. Concepts are ways and means that can be used to achieve a desired goal. In this case, the concepts are the materiel and organizational solutions conceived by the Army to fill the deep sensing capability gap. It is important to note that concepts need to be modeled, tested, and validated to prove their ability to fill a requirement before they are approved.

Colonels (COL) Adams, Dotson, McAfee, Ziemba, and Dwight Duquesnay wrote an article in the 2019 Military Intelligence Professional Bulletin discussing fixing the EAB sensor challenges to support MDO. They explain that the E-MIB was initially designed to provide downward reinforcing support to the BCTs in a COIN environment.[86] They then explain that the future concepts for the E-MIB focus on meeting corps and division requirements in MDO.

> The future E–MIB will feature integrated intelligence and electronic warfare formations. These units will conduct analysis and PED in support of corps and division G2s at the main command post. They will support cross-domain targeting and ISR asset management in support of corps and division fires and effects. Integrated SIGINT and EW formations at corps and division will prove the capability to compete in the electromagnetic spectrum.[87]

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[86] William Adams, Mark Dotson, Jennifer McAfee, Francesca Ziemba, and Dwight Duquesnay, "Fixing Echelons above Brigade: Sensor Challenges in Multi-Domain Operations." *Military Intelligence Professional Bulletin* 45, no. 3. (July-September 2019).

[87] Ibid., 14.

The article further analyzes how the MI corps will fill the LSCO collection gaps through technology, but it does not address why current concepts are focused on the E-MIBs receiving these additional assets as opposed to the divisions. The model that the authors propose reinforces the E-MIBs with resources, effectively making them the main effort for PED and intelligence operations at the corps and division levels.

In June 2019, the USAICoE Capability Development Integration Directorate published an information paper titled, *Gap One: Lack of EAB MD Sensing, Analysis and PED for Indication and Warning and A2AD Targeting*. The purpose of the information paper is to provide a summary of the Army's EAB deep sensing and targeting capability gap and proposed solutions for the Total Army Analysis 22-26.[88] This information paper provides two solutions to address the Army's multi-domain sensing gap by changing the organizational structure, equipment, and personnel of the E-MIB. Both options would provide "[multi-domain] SIGINT, electronic support, electronic attack, PED, and analysis by transforming the current E-MIBNs into IEW battalions, and activating additional units to provide more available forces to the divisions and corps".[89] This plan creates two types of IEW battalions, one designed to support the corps headquarters and one designed to support the division headquarters.

The first option is to create enough battalions in the three E-MIBs to provide one to each of the three Army corps and ten division headquarters. The second option would

[88] Dwight Duquesnay, "Gap 1: Lack of EAB MD Sensing, Analysis and PED for I&W and A2AD Targeting," (Information Paper, U.S. Intelligence Center of Excellence, Fort Huachuca, AZ, 19 June 2019).

[89] Ibid.

be a zero total growth option that would have the E-MIBs grow to provide an IEW battalion to each corps headquarters and to only eight of the ten divisions. This shows that the Army believes the modularity concept remains the best option by keeping the IEW battalions as independent units under the E-MIB that can be allocated to supported units when required. The information paper did not address if the current sustainment elements within a division have the capacity to support another battalion size element. Regardless of the complexities, this information paper shows that the Army is likely to bring back a version of the deactivated MI battalions to support division headquarters.

In June 2019, the Army Intelligence Center of Excellence created a draft organizational design paper for an Army Force Design Update (FDU) to address the Army's intelligence structure to meet the MDO and LSCO requirements of the Army 2028 strategy. The paper listed five intelligence-based capability gaps within the current division structure. The gaps are: conducting multi-domain collection (deep sensing), MDO ISR management, MDO target development, support to combat and battle damage assessments, and mission command of MI assets.[90] The paper recognized that the division will be the primary tactical warfighting headquarters, and bases its conclusions on the premise that the division cannot accomplish its intelligence tasks in LSCO without a battalion size formation to support it.

The course of action to remedy this gap is directed solution from the Combined Arms Center based on the LSCO Study. It directs the transformation of the three active duty E-MIBs to provide one IEW battalion per corps and one IEW battalion per active

[90] USAICoE, "E-MIB Force Design Update (Draft)."

duty division.[91] Nonetheless, resourcing guidance and restraints may cause a partial reorganization that would not produce enough IEW battalions for all ten Army divisions. The design paper also states that an assumption is that ARNG and USAR units do not have to mirror the active duty structures.[92] The ARNG will transform to provide two E-MIB headquarters and eight IEW battalions as general support to the ARNG divisions. The USAR will provide three E-MIBs, each with two E-MIBNs that will be general support to active duty forces to provide surge capabilities in CI, HUMINT, Analysis, and PED.[93]

The draft organizational design paper recommends co-locating the new active duty E-MIB IEW battalions with their supported divisions and states that Forts Hood, Bragg, and Lewis have not been required to create facilities to support the proposed units.[94] The concept does not explain the rational of activating MI battalions at divisional locations across the Army and not making them part of the divisions that they would be directly supporting. Activating units that are geographically separated from their parent headquarters creates its own set of challenges. It is possible that these units would have a dual command support relationship between their parent E-MIB and the divisions they support. This could create a situation where the battalion commander has a COL in his

[91] USAICoE, "E-MIB Force Design Update (Draft)."

[92] Ibid.

[93] Ibid.

[94] Ibid.

direct chain of command from the E-MIB, but a Major General division commander to whom he has to provide trained and ready forces to.

In 2017, the Army SIGINT community conducted a deep dive to analyze the LSCO Gap One. The study concluded that SIGINT PED was still relevant to the intelligence community, but the scope of collection needed to change.

> The shift from BCT to division as the unit of action for large-scale combat operations and the operational convergence of SIGINT with cyber-electromagnetic activities may affect future force structure and concepts of employment; however, it will not affect the enduring requirement for MI units to perform SIGINT PED.[95]

The authors explain that the wars in Iraq and Afghanistan have created a gap in SIGINT training because the focus has been on collecting against insurgencies. This has resulted in tactical SIGINT against peer threats being in a state of training atrophy.[96] The need to fill the SIGINT gap has resulted in the rapid prototyping of the Terrestrial Layer System (TLS).[97] The current tactical SIGINT platform is derived from the Prophet family managed by General Dynamics, which was designed when the capabilities requirements documents were focusing on COIN operations.

The TLS is an integrated SIGINT and EW ground system designed to fill the requirements for LSCO. “Both are integrated platforms the Army is using to experiment

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[95] Jason Boslaugh, and Bryan Lasater, “Army Signals Intelligence Deep Dive: Developing a Strategy for the Future,” *Military Intelligence Professional Bulletin* 44, no. 4 (October-December 2018).

[96] Ibid.

[97] Mark Pomerleu, “Here's What the Army is Looking for In Its New EW Program,” *C4ISRNet,* February 21, 2019, accessed 21 September 2019, https://www.c4isrnet.com/electronic-warfare/2019/02/21/heres-what-the-army-is-looking-for-in-its-new-ew-program/.

with different technologies that would allow for sensing, signals intelligence, electronic warfare, and [radio frequency]-enabled cyberattacks. May said these subsystems are in the pre-prototype phase."[98] The initial capabilities document for the TLS has been approved, and the capabilities development document is in production, meaning the system is currently in the defense acquisition system process.[99] The TLS is distributed across several programs for varying sizes of capabilities. The authors explained this includes TLS extended range, which will be a division and corps asset, TLS large, which will be a brigade asset mounted on a large vehicle like a Stryker, TLS small, which will likely remain vehicle mounted but a smaller form factor, and TLS dismount."[100]

The 2019 fourth quarter Intelligence and Securities Command Commander's Conference discussed collecting intelligence in MDO. The brief by the Army G2, Lieutenant General Berrier, identified that the TLS large, and various new intelligence platforms would be operating at the division and corps echelons.[101] His brief explains

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[98] Mark Pomerleu, "What's the Best Way For The Army To Demonstrate Force Via Electronic Warfare?" *C4ISRNet*, 17 June 2019, accessed 21 September 2019, https://www.c4isrnet.com/electronic-warfare/2019/06/17/whats-the-best-way-for-the-army-to-demonstrate-force-via-electronic-warfare/.).

[99] Armed Forces Communication and Electronics Association, (PowerPoint Presentation, PEO IEW&S Army Industry Day, 2019), accessed 28 December 2019. https://www.afcea.org/event/sites/default/files/files/PEO%20IEW%26S%20Army%20Industry%20Day%20Slides.pdf.

[100] Mark Pomerleu, "When the Army Could Get New Electronic Warfare Units," *C4ISRNet*, 22 August 2019, accessed 21 September 2019, https://www.c4isrnet.com/show-reporter/technet-augusta/2019/08/22/when-the-army-could-get-new-electronic-warfare-units/.

[101] Scott Berrier, "Multi-Domain Intelligence: Army Intelligence Modernization Framework," (Briefing, Intelligence and Securities Command Commander's Conference, Ft. Belvoir, VA September 19, 2019).

that the division deep area would be contested, and the future collection platforms would be required to be staged in the tactical support area.[102] The MICO will likely not be issued the extended range sensors, which means the company SIGINT teams would not have the capability to support division deep collection.

The 2014 Army intelligence training strategy provides the ends, ways, and means to train intelligence soldiers throughout the Army. It assigns the training responsibilities of the Army G2, Intelligence and Securities Command, U.S. Army Intelligence Center of Excellence (USAICoE), FORSCOM, and the ARNG G2. A stand-alone intelligence training program is Foundry, which "assists soldiers in maintaining perishable individual technical skills and certifications."[103] The Army G2 is overall responsible for Foundry's policy and oversight, and the Intelligence and Securities Command is responsible for executing the Foundry program. "Foundry training nodes are geographically dispersed to support high densities of intelligence personnel across all components."[104] Installations with a higher density of MI soldiers have a more robust Foundry site that can train all the intelligence disciplines on individual and collective tasks. This means that soldiers who are not near one of these Foundry nodes may be required to travel to them to complete their MI training.[105]

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[102] Berrier, "Multi-Domain Intelligence."

[103] Headquarters, Department of the Army (HQDA), *Army Intelligence Training Strategy* (Fort Belvoir, VA: Government Printing Office, January 2014), 2.

[104] Ibid., 12.

[105] Headquarters, Department of the Army (HQDA), Army Regulation (AR) 350-32, *Training Army Foundry Intelligence Training Program* (Washington, DC: Government Printing Office, June 2015).

The Foundry training infrastructure is key to maintaining trained MI soldiers in the Army. While new equipment, such as the TLS, will be fielded to the Army with an initial training package, the Foundry sites maintain the systems and capabilities to train new soldiers on the equipment. The more reliant on technology the intelligence community becomes, the more reliant the Army will become on the Foundry sites to maintain their training programs so units can sustain an acceptable readiness rating.

The literature of the future concepts show that the Army and the MI branch are actively addressing the deep sensing gap by attempting to provide organizational and materiel solutions. Once approved by Total Army Analysis and funded through the planning, programming, budgeting, and execution, the doctrine and training will begin to be updated to reflect these new changes. Nonetheless, a change this large in scale will likely have additional requirements such as new facilities, maintenance, personnel, and leadership requirements, as well as changes to policy. If executed, these changes will take years to be implemented and mature into functional capabilities capable of closing the deep sensing gap.

Gaps in Literature

It is understandable that emerging concepts are generally vague. The Army has recognized that there is a deep sensing gap in MDO and is currently designing the organizations and materiel required to fill that gap. Even when expedited, the acquisition timeline from the materiel solutions analysis to the production and deployment phase can take several years. In this instance, the TLS may eventually fill the sensing gap, but it must first pass through the experimentation phase. Experimentation conducts testing and simulations on the equipment, which is then analyzed to ensure that it meets the

capability requirement. Because the emerging technology is not ready to be fielded, there can be no firm policies in place for how the Army will change its force structure.

Army doctrine is written based on the current Army structure and supports the overall Army vision, strategic plan, campaign plan, planning guidance, and program guidance. There is no intelligence doctrine that fully explains how to operate in a multi-domain LSCO environment against a peer or near-peer threat because the concepts are still being explored. Doctrine is also hierarchical in nature, and while ADP 3-0 and FM 3-0 generally explain how the Army will fight in LSCO, it takes time for subordinate publications throughout the service to update to these concepts. Because of this, much of the current doctrine that the intelligence corps must utilize to design its force is outdated.

Summary of Literature

The summary of literature identifies a significant parallel between the post-Vietnam Army and the modern force. It explains that after Vietnam the Army recognized the MI force structure did not support operations against a near-peer threat, and it activated the CEWI battalions to fill this gap. The Army finds itself in a similar situation while it attempts to transition from a force structured to operate in a COIN environment to that of LSCO. In both cases, a major shift in doctrine drove the change. The active defense designed to fight the Soviets in Europe led to materiel innovations that created equipment that could accomplish this task, just as the Army today created the LSCO doctrine and is developing equipment to meet that challenge.

The established literature answers the first secondary research question by explaining how the deactivated CEWI battalions historically supported their organic divisions. While the CEWI battalion was fielded with the technical equipment it needed

to collect information it needed to support the commander's maneuver plan, it suffered complications throughout its tenure. The emergence of a new generation of combat vehicles limited its ability to maneuver on the battlefield and the organizational structure created complications that lasted until the units were deactivated. Though the unit was deactivated to help the Army create a structure to support COIN operations in Iraq and Afghanistan, it was a unique and necessary part of the force structure that accomplished the information collection requirements inherent in AirLand Battle. The adage "everything old is new again" is fitting as the Army designs new MI battalions to support Army divisions against peer and near-peer threats in LSCO.

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this thesis is to determine if the Army's divisions require an organic MI battalion added to their force structure to be capable of collecting information in the division deep area. This paper uses Army Design Methodology (ADM) to provide qualitative analysis in terms of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P). ADM, depicted in Figure 3, is a practice that repeatedly reframes the problem to identify approaches to obtain solutions.

> ADM is an interdisciplinary approach to planning and problem solving. It combines military theory, writings on the nature of problems, and the challenges of critical and creative thinking. Some of these constructs such as operational art have long been associated with military planning. Other constructs such as systems thinking and framing have recently taken on increased emphasis.[106]

The DOTMLPF-P provides a systems perspective to conduct a capabilities-based assessment across the domains to provide analysis of the current state to determine viable solutions. This research analyzes the DOTMLPF-P domains to create a comprehensive approach that identifies challenges and solutions across a wide spectrum. For the purpose of this paper, changes to the organizational variable will drive changes to the others. The established literature shows that some form of organizational change is necessary to fill the deep sensing gap. Any change to the personnel structure of a unit causes changes in how the unit operates, trains, how it is equipped, and what facilities it requires. This assumes that the Army will successfully develop technological materiel solutions for

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[106] Headquarters, Department of the Army (HQDA), Army Training Publication (ATP) 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, July 2005), 1-5.

collecting in the division deep area and will focus on how these emerging technologies could be fielded in Army units.

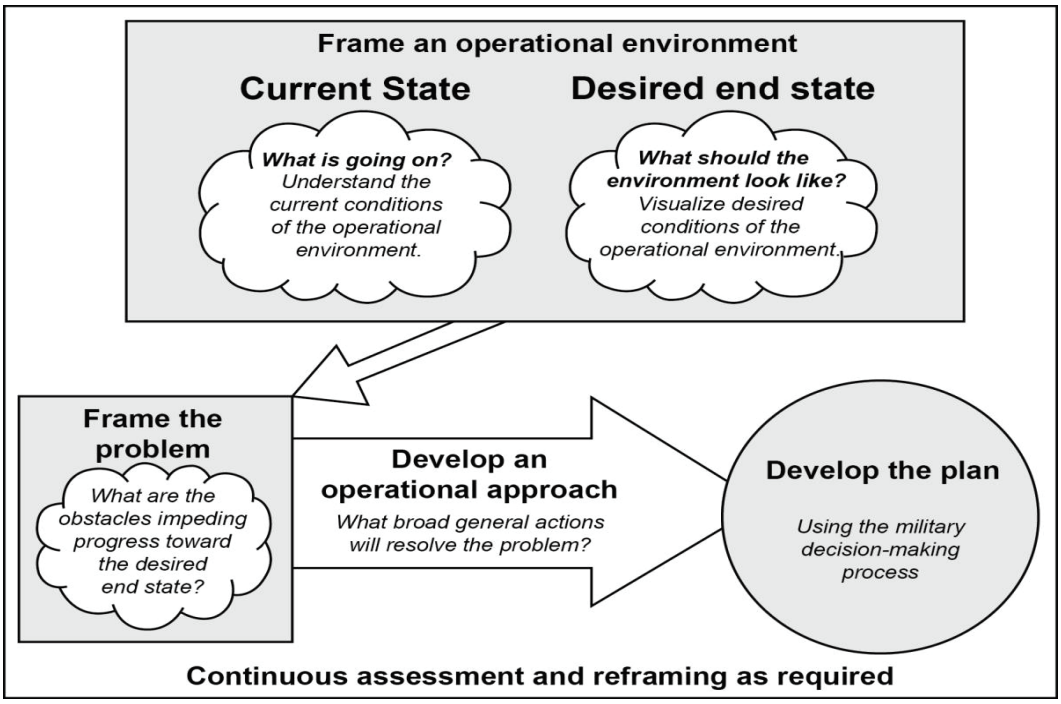

Figure 3. ADM

Source: Headquarters, Department of the Army, Army Training Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, July 2005), 2-3.

The doctrine and policy variables remain constant throughout the models and are addressed in the analysis section. When a capability gap is identified, the doctrine variable of DOTMLPF-P is analyzed to identify if the current body of literature is current, and if not, how and where it should be updated. It is not feasible for doctrine writers to forecast how future organizational or materiel concepts should be employed because they have not, and may never be, approved. The doctrinal analysis in the

literature review analyzed the current state of doctrine and explained the current gaps in regard to how the Army plans on closing the deep sensing capabilities gap.

The policy variable is defined as, "Authoritative written guidance that affects capabilities development."[107] The proponent for force management Army's intelligence corps is the commander of the USAICoE. The USAICoE commander works concurrently with the commander of the Combined Arms Center, FORSCOM, and the Department of the Army G2 to identify capability gaps, recommend organizational and materiel changes, and provide input for the Total Army Analysis that will drive the change. The functions of this variable do not change across the three models in the analysis section and will not be discussed in greater depth.

Eight requirements are used as evaluation criteria against each model to determine if each model is suitable, feasible, and acceptable. Collection in the division deep area requires additional capabilities beyond the actual collection of information to create intelligence useful to the battlefield commander. These required capabilities were identified by the July 2019 organizational design paper as the division intelligence gaps, which will serve as the first five evaluation criteria. The sixth criterion is flexibility, which evaluates how quickly and efficiently an organization can adapt to changes in the Army. This is based on the historical account that the CEWI battalion was designed for the active defense doctrine but fell short of its full potential when the Army transitioned to AirLand Battle. The seventh criterion is sustainment and evaluates if the organization

[107] Headquarters, Department of the Army (HQDA), Army Regulation (AR) 5-22, *The Army Force Modernization Proponent System* (Washington, DC: Government Printing Office, October 2015), 13.

can operate independently or if it requires external support to operate in a LSCO environment. The final criterion is simplicity, which evaluates the difficulty of integrating each organization into the division structure to successfully complete the first five criteria. Unit and team integrity, the ability to train with the division, and formal command and support relationships to operate under a clear command structure are considered with this criterion. Table 1 shows the evaluation method, which includes the criteria and rating scale.

Table 1. Evaluation Method

	Evaluation Criteria	Model 1	Model 2	Model 3
1	Conduct multi-domain collection (deep sensing).			
2	Conduct MDO ISR management			
3	Conduct MDO target development.			
4	Conduct Support to Combat Assessment/BDA			
5	Conduct Mission Command of MI Assets			
6	Flexibility to Change Structure			
7	Self-Sustainment			
8	Simplicity			
+ Capable / Semi-Capable - Not Capable				

Source: Created by author.

CHAPTER 4

ANALYSIS

The first step of ADM is to frame the current operational environment and frame the desired end-state. The available literature identifies that there is a need to change the MI force structure to meet the requirements of operating in a LSCO environment. Like the post-Vietnam era, the army is positioning to face a peer or near-peer threat and it appears to be willing to take risk on COIN operations. The Army has three operational corps in its structure. It also has ten active duty divisions (and one division that is designed only to be an administrative headquarters), eight divisions in the ARNG, and nine divisions in the USAR. The USAR divisions are responsible for training and support operations and are not structured as the active duty or ARNG units, and therefore will not be addressed.

As mentioned in the literature review, the Army divisions have no organic forces to conduct deep sensing because the MICOs are designed to support the BCT commander's fight in the close area. There are seven E-MIBs in the Army, three on active duty, two in the ARNG, and two in the USAR. This results in a total of 14 E-MIBNs in the Army to support 17 active duty and ARNG divisions, and three corps. If the three active duty corps and ten divisions require an E-MIBN, there will only be one left for the remaining nine ARNG divisions.

The desired end-state has two requirements. The first requirement is that the U.S. Army divisions obtain the capability to collect information against a peer adversary in the divisional deep area. The second requirement is to design this capability without adding personnel requirements that would place the Army above its congressionally mandated

cap. Any proposals that would place the Army over the personnel cap would either have to be approved and legislated by Congress or would require the Army to remove personnel from other parts of the service.

The second step of ADM is to define the problem. The gap defined in the LSCO Study is, "Corps and Divisions have no organic multi-domain deep sensing capability to locate, identify, track and target key peer/near-peer threat systems and networks during [multi-domain] LSCO."[108] A LSCO fight against a peer adversary is designed to be led by a field army that will be supported by multiple corps and divisions. The amount of land forces available to a peer adversary such as Russia or China would require the Army to deploy the majority of its divisions to serve as a deterrent to conflict, and to win in LSCO if hostilities break out.

The LSCO requirement means that there would be a heavier reliance on SIGINT and GEOINT, requiring MI units to have capabilities like those in the 2003 invasion of Iraq. The HUMINT and CI assets are valuable in combat but have more of an effect in the shape, prevent, and consolidate gains strategic roles. Understanding that the Army's divisions will transition through the four strategic roles means that there has to be a mix of intelligence disciplines that are capable of shifting their operations based on the phases. The 2003 invasion of Iraq and subsequent stability operations lacked the capabilities to conduct bottom up intelligence collection, meaning that there has to be enough HUMINT and CI presence to ensure further success after the large fight is over.

[108] Duquesnay, "Gap 1: Lack of EAB MD Sensing."

The third step in ADM is to develop an operational approach. "The operational approach provides a framework that relates tactical tasks to the desired end state. It provides a unifying purpose and focus to all operations."[109] This research will use three force design models that could potential satisfy the Army's requirements. The first model will analyze the current MICO and E-MIB structures to determine if the available forces can be slightly reorganized to create an organization capable of filling the capability gap. The second model will test the suitability of the draft USAICoE organizational design paper to determine if it can be advanced into a force design update. The final model will use the structure proposed in the USAICoE paper, but instead of the IEW battalions assigned to the E-MIB they would be assigned to the divisions.

The final step of ADM is to develop the plan, which will be completed through an assessment. "Assessment is the determination of the progress toward accomplishing a task, creating a condition, or achieving an objective."[110] The assessment is evaluated and addressed in the conclusions and recommendations chapter of this thesis, and will compare and contrast the models to provide qualitative analysis to identify the optimal solution.

Model One: One C&E Company Per Division

The primary research question is to identify if the Army's divisions need an organic MI battalion added to their force structure to collect information in the division deep area. To partially answer this, it is necessary to answer secondary research question

[109] HQDA, ADP 3-0, 2-3.

[110] HQDA, ATP 5-0.1, 6-1.

number two to determine if the division's MICOs and E-MIB augmentation can fill this gap. If this force package can satisfy the capability gap, it may challenge the statement in the organization design paper that the divisions need a battalion size element to support intelligence in LSCO. The active duty E-MIBs have a total of six C&E companies designed to support a corps, divisions, and brigades. This model adds four C&E companies in the E-MIBs to a total of ten, which would provide one to augment each active duty division. If this minor change enables the E-MIBs to support the divisions in LSCO, then it may disprove the primary research question. This model is reliant on the division assuming risk by requiring the BCTs' collection assets to reprioritize to support the division commander's requirements if there are not enough assigned assets from the C&E Company.

Organization

The BCTs are the only units in the division that have organic intelligence collection capabilities, with one MICO each. Figure 4 shows how doctrine states division should receive a general or direct support MI Company from an outside unit, which in this case would be the E-MIB. While the doctrine does not specify which type of E-MIB intelligence company the division would receive, this organizational model uses the C&E companies because they provide the multi-disciplined capabilities needed to fill the LSCO gap.

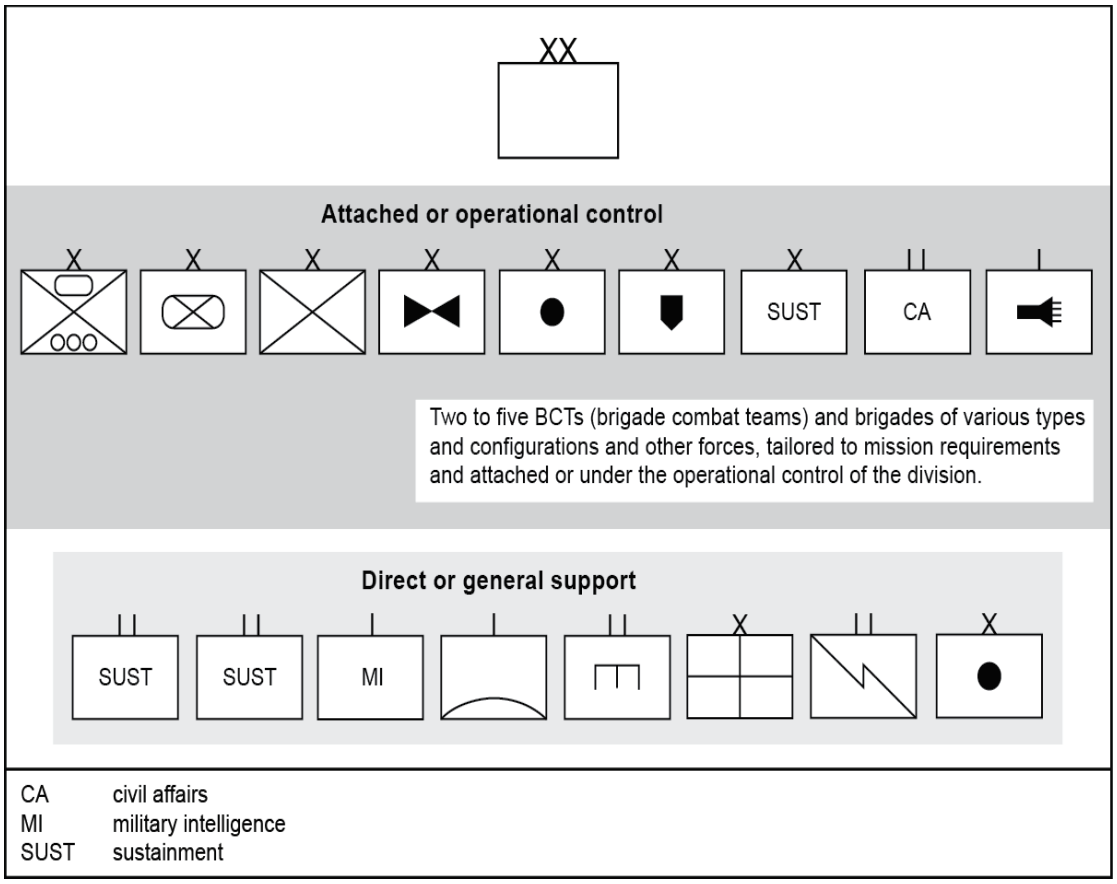

Figure 4. Division Task Organized For LSCO

Source: Headquarters, Department of the Army, Field Manual 3-0, *Operations,* Change 1 (Washington, DC: Government Printing Office, December 2017).

The current doctrine does not prescribe how the E-MIB forces should be allocated to the divisions to enhance the overall flexibility to provide capabilities based on mission requirements. However, it is acknowledged that in LSCO the BCTs will not receive any E-MIB support.[111] In addition to each division receiving direct support from one C&E Company, the six E-MIBN headquarters could be available to support six of the divisions

[111] HQDA, FM 2-0.

to assist with intelligence operations. This means that if the situation requires it, six divisions would each receive an E-MIBN headquarters and a C&E Company, and four divisions would only receive a C&E Company. This reflects an overall Army growth of four C&E companies, and no growth to the E-MIBN headquarters. Figure 5 provides an example for how III Corps could allocate the battalions and companies.

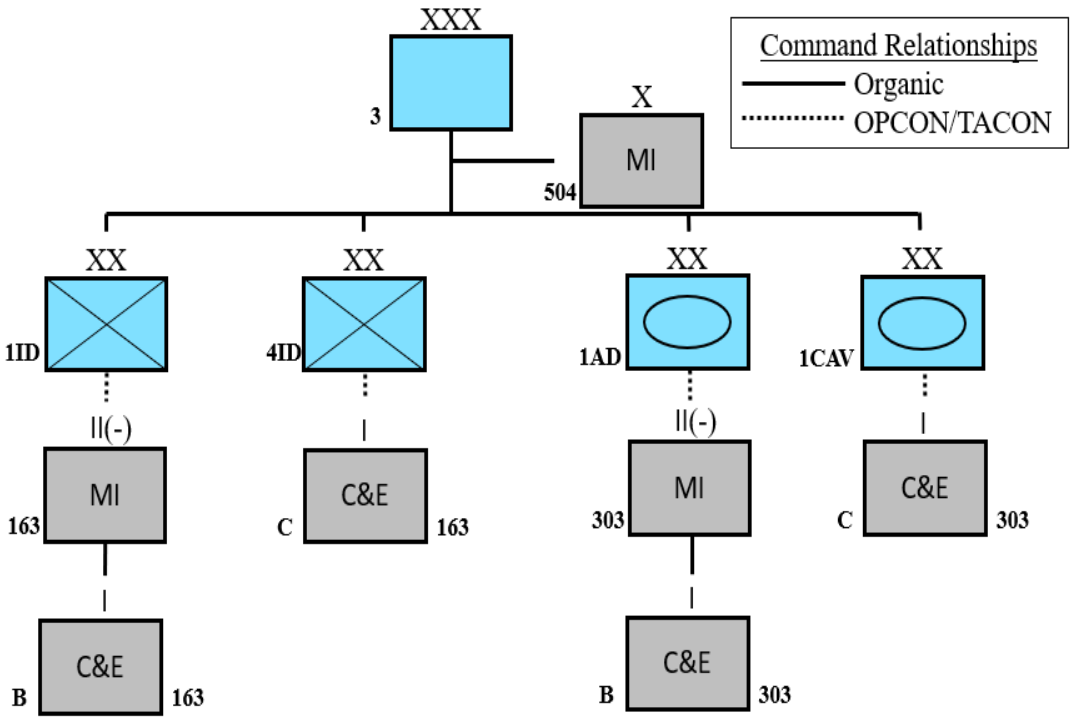

Figure 5. Example of III Corps Distribution of E-MIB Support to Four Organic Divisions

Source: Created by author.

This model does not grow the number of battalions but provides flexibility for where they could operate in LSCO. The corps would have the option to retain the E-MIBN headquarters to support their operations, have them support the division directly,

or assign them to other duties that the mission may require. Ideally, the six E-MIBNs would be attached to the six divisions identified by the corps and field army headquarters to be the most in need. The corps would then use the HUMINT and CI companies to support collection operations in the corps and division consolidation areas. The current mission statement of the E-MIBN is to:

> Conduct multidiscipline intelligence operations in support of echelons corps and below unified land operations. Receives, integrates, employs, and sustains intelligence enterprise capabilities in support of division, brigade combat team, and joint task force commanders.[112]

Model one does not change the mission statement of the E-MIBN because it maintains flexibility throughout the Army's four strategic roles. While the Army is directing its efforts towards LSCO, this mission provides the direct guidance to ensure the battalions area capable of transitioning between the roles to support stability tasks.

The C&E Company consists of 144 soldiers and has the mission to, "Conduct multi-discipline SIGINT and HUMINT collection and analysis; and SIGINT and imagery intelligence PED."[113] A C&E Company consists of three PED platoons, a tactical ground station platoon, and a multifunction platoon. Each PED platoon consists of all-source, SIGINT, GEOINT, and linguists who are trained to process raw information and convert it into actionable intelligence. The multifunction platoon consists of a HUMINT operational management team, four multifunction teams, and a cryptologic support team.

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[112] Army Training Network (ATN), "MI Battalion Expeditionary Mission Essential Task List," U.S. Army, 14 August 2019, accessed 8 December 2019, https://atn.army.mil/ATNPortalUI/METL/.

[113] Army Training Network (ATN), "MICO (Collection & Exploitation) (E-MIBN) Mission Essential Task List," U.S. Army, 16 August 2019, accessed 12 December 2019, https://atn.army.mil/ATNPortalUI/METL/.

Under the current design, the PED and tactical ground station platoons support the division G2 and the multifunction teams can either support the division or be tasked to support the BCTs. Under this model, the C&E would support the G2 section, but would be managed by the deputy G2 and work for the division analytical control element. The multifunction teams would remain under division control as they would be supporting division level collection.

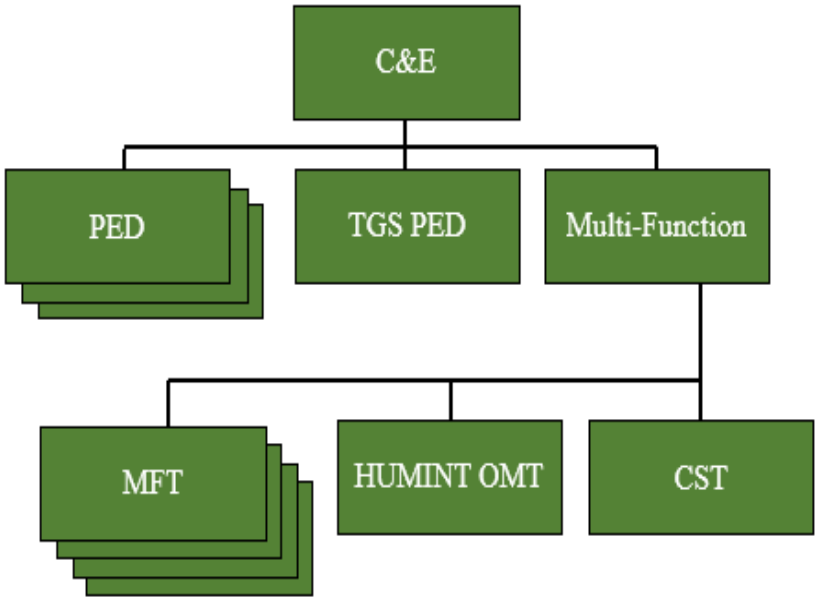
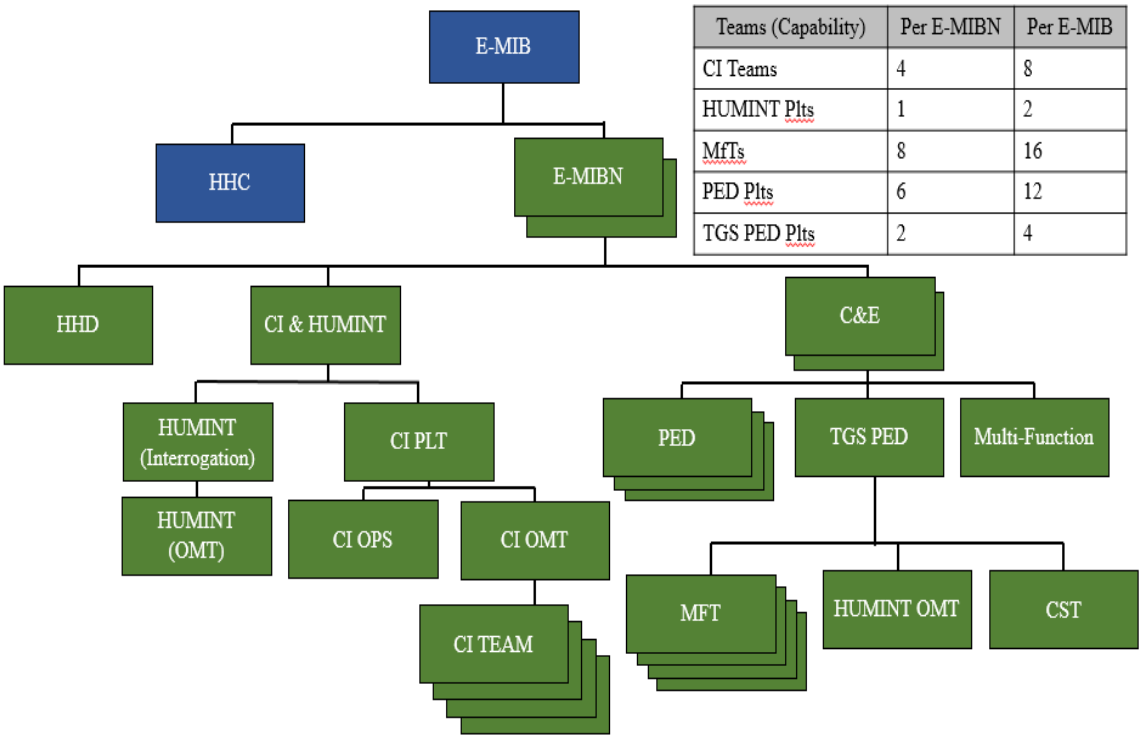


Figure 6. C&E Company Design

Source: Created by author using information from Force Management Website, U.S. Army, 16 October 2019, accessed 26 February 2020, https://fmsweb.fms.army.mil/protected/secure/tools.asp.

The four additional C&E companies would be split between the 525th E-MIB at Fort Bragg and the 504th E-MIB at Fort Hood. These two E-MIBs each support four

divisions in their assigned corps, while the 201st E-MIB currently has two C&E companies that can support I Corps' two divisions. The three active duty E-MIBs currently support divisions and corps in an ad hoc fashion that requires them to provide tailored packages of personnel and equipment to support their requirements. This model takes the lessons from these ad hoc support packages and codifies them into the organizational structure. Figure 5 depicts the structure of the additional C&E companies added to the 504th and 525th E-MIBs.



Teams (Capability)	Per E-MIBN	Per E-MIB
CI Teams	4	8
HUMINT Plts	1	2
MfTs	8	16
PED Plts	6	12
TGS PED Plts	2	4

Figure 7. 504th and 525th E-MIBs with Additional C&E Company

Source: Created by author using information from Force Management Website, U.S. Army, 16 October 2019, accessed 26 February 2020, https://fmsweb.fms.army.mil/protected/secure/tools.asp.

BCTs nest their intelligence collection plans with the division's requirements and shape them to gather the information that they can based on their mission. In LSCO, BCTs will be looking for the same types of enemy systems, vehicles, personnel groupings, and other high payoff targets, as the division, but their area of interest will be smaller because it is relegated to the close area. If the MICO has the capability to collect on the division's requirements, it would be simple enough for the division to direct the MICO to collect against it. While this would take some autonomy away from the BCT commander's ability to direct his collection assets, it would likely have a greater effect on the battlefield to answer division's requirements. The BCT's MICO mission is:

> To provide timely, relevant, accurate, and synchronized Intelligence, Surveillance, and Reconnaissance support to the maneuver units within the Brigade Combat Team commander, staff and subordinates during the planning, preparation, and execution of multiple, simultaneous decision actions on a distributed battlefield.[114]

This mission statement is based on the theory that the BCT will be operating in a "distributed battlefield," though there is no definition for this in the current doctrinal lexicon. This term infers operating in a noncontiguous battle space or semi-autonomous role from its higher headquarters. This was the case in the COIN environment but requires the mission statement should have this statement removed to nest with FM 3-0.

[114] Army Training Network (ATN), "MICO BCT W/COIST Mission Essential Task List," U.S. Army, 21 January 2020, accessed 21 February 2020, https://atn.army.mil/ATNPortalUI/METL/.

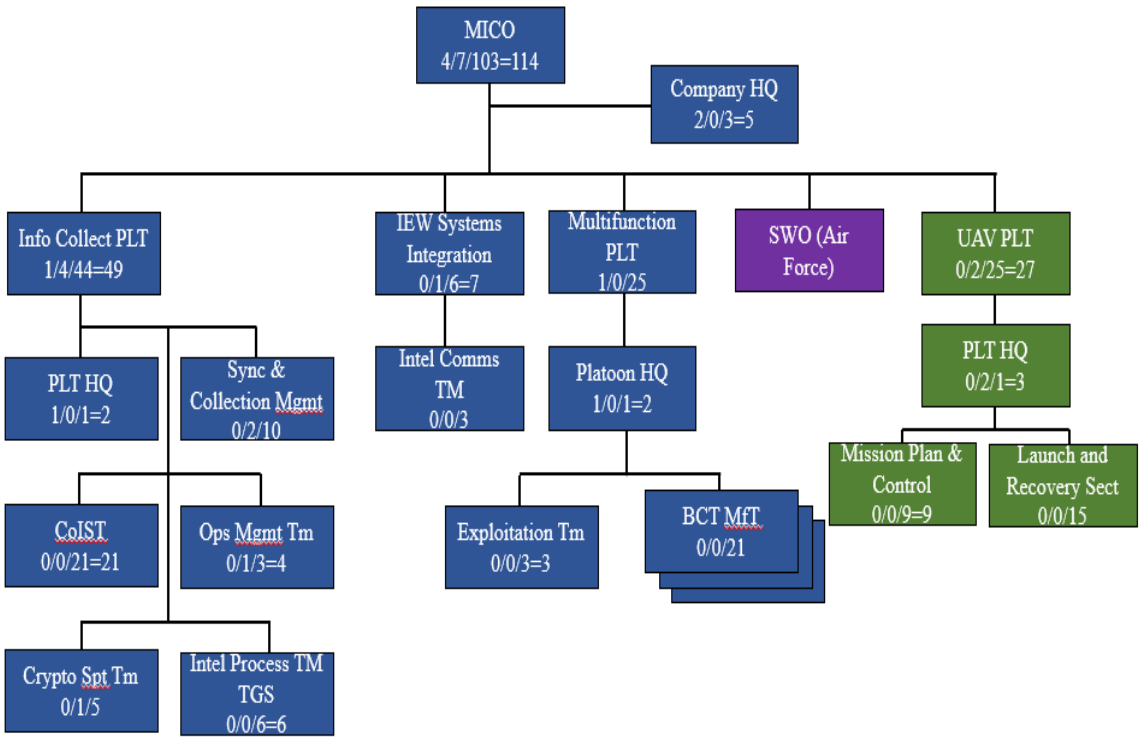


Figure 8. BCT MICO Composition

Source: Created by author using information from Force Management Website, U.S. Army, 16 October 2019, accessed 26 February 2020, https://fmsweb.fms.army.mil/protected/secure/tools.asp.

The MICO consists of a headquarters section, an information collection platoon, IEW systems integration, multifunction platoons, staff weather officers, and a tactical UAS platoon. The information and collection platoon consists of an all-source synchronization and management cell, Company Intelligence Support Team (CoIST), a SIGINT cryptologic support team, a HUMINT operational management team, and a geospatial processing team. The multifunction platoon consists of three combined HUMINT and SIGINT collection teams. Tasking HUMINT at the BCT is a relatively simple task because source operations, tactical questioning, and interrogations generally

involve gathering information that the higher headquarters is already interested in. This questioning can be shaped to collect information on the close and deep areas to satisfy immediate and future information requirements. SIGINT collection can also support the division collection plan, but this would require deliberate planning and preparation due to the technical nature of this discipline.

Training

FM 7-0 states that a Mission Essential Task (MET) is "A collective task on which an organization trains to be proficient in its designed capabilities or assigned mission."[115] METs are the primary collective tasks that all army units train to be proficient in and requires a large amount of time and resources to build and maintain proficiency. Any MI unit that is attached to another organization is expected to be trained and ready to complete their mission based on their assigned METs.

The E-MIBN that could be attached to a division in LSCO would be expected to integrate all available intelligence capabilities and support the G2 in implementing the intelligence plan. The E-MIBN has four METs. They are: direct operational intelligence activities, process collected operational information, collect relevant information, and conduct expeditionary deployment operations at the battalion level.[116] These METs are designed to provide a more managerial role to enable their organic and attached units to

[115] Headquarters, Department of the Army (HQDA), Field Manual (FM) 7-0, *Train to Win in a Complex World* (Washington, DC: Government Printing Office, October 2017), 1-8.

[116] ATN, "MI Battalion Expeditionary Mission Essential Task List."

conduct multi-disciplinary intelligence tasks. Like the CEWI battalion, the E-MIBN's task is to provide trained and ready forces and to support the intelligence plan.

The E-MIB's C&E Company has five METs. They are: conduct HUMINT collection, conduct SIGINT collection, process signals and GEOINT, perform multifunctional team missions, and conduct expeditionary deployment operations.[117] The BCT MICO has six METs. The tasks are to conduct aerial reconnaissance missions, manage information collection requirements, perform situation development, conduct human intelligence collection, conduct SIGINT collection, and conduct expeditionary deployment operations.[118]

The two sets of METs are similar between these two organizations. The main difference is the MICO's tasks are designed to support the BCT S2's collection and processing to answer the BCT commander's requirements, whereas The C&E Company's METs are broader to enable the formation to plug into different types of units and echelons with a greater focus on SIGINT, HUMINT, and PED. A gap in the METs of both companies is that they are not designed to support the targeting process, combat assessments, or lead the mission command of MI assets beyond what they already have.

Materiel

In this model, the BCT MICOs would be assigned the TLS-extended sensors only if the technology supports the ability for the MICO to collect both in the close area and

[117] ATN, "MICO (Collection & Exploitation) (E-MIBN) Mission Essential Task List."

[118] ATN, "MICO BCT W/COIST Mission Essential Task List."

the division's deep area. If the extended range sensors are not capable of both, and if transitioning between the two capabilities is not possible in a combat environment, then the BCTs should be issued the TLS-small and man portable. The C&E companies would be issued the extended range sensors as their primary task would be to support the division. However, this could limit the C&E companies' ability to support collection in the close area and limit their effectiveness when there is a shift to stability operations.

Leadership and Education

This model recommends no changes to the formal education of individual soldiers or officers. However, team and collective training between the C&E Company and the division it is to be attached is paramount. Just as the CEWI battalions learned that they had to train with their maneuver brethren to successfully integrate, the C&E companies would have to do the same. The fact that these companies would be stationed with their E-MIB headquarters means that many of them would be geographically separated from their supported divisions, making it more difficult to create experiential learning.

Attaching an E-MIBN to a division provides that unit's organic command and control. The E-MIBN commander and staff would advise the G2 on the unit's capabilities when developing the information collection plan. However, this would only be effective for six divisions as there are not enough active duty E-MIBNs to assign to each division. Unless ARNG E-MIBNs were called to active duty to augment, four divisions would have to use their personnel in the G2 to conduct mission command of the attached company.

Personnel

Creating four additional C&E companies would create a total growth of 576 personnel. This addition would be balanced by removing the CoISTs from the 31 active BCTs, freeing up 651 billets. Five maintenance soldiers would be added to each of the six E-MIBNs to provide support to the additional company. The remaining 45 billets would then offset the increased grade plate of mid-grade officers and senior noncommissioned officers required to run these additional companies.

There is no change to any existing Military Occupational Specialty (MOS), nor are there different entry requirements to join any MOS. In this model, 35F all-source billets would be taken from the BCT CoISTs and redistributed to create the four C&E companies. This would result in a small decline in the total number of 35Fs in the Army as many of their billets would be transferred to SIGINT, or GEOINT.

Facilities

Ft Bragg and Ft Hood would each be required to allocate two company headquarters buildings and one barracks building to support this growth. Additional site surveys would need to be completed to identify if more motor pool space would be required. The two locations currently have the training and network infrastructure to support this growth. The removal of the CoIST's will likely result in opening training spaces in the classified training buildings, which would offset any growth on the installations.

Model One Summary

The primary strength of model one is that it requires a minimal amount of change across the DOTMLPF-P domains to implement. The organizational structure provides the divisions the ability to transition between the Army's four strategic roles without any major requirement changes. The organizational change does not add personnel to the overall force structure and codifies the current ad hoc arrangements that E-MIBs and divisions are currently operating under. There are minimal changes to training, materiel, personnel, and facilities, with no changes to policy.

While this model may be the easiest model to implement, it has critical weaknesses that outweigh the strengths. The ability to transition between LSCO and COIN does not mitigate the threat of defeat or unacceptable loss in a multi-domain fight in LSCO. This model does not deliberately satisfy the requirement to conduct MDO ISR management, target development, or support to combat assessment. While there may be enough SIGINT and HUMINT collection assets to collect the required information in the deep area, the PED teams do not have the capacity to support the required level of analysis required to transform the data into meaningful products. The organizational structure also creates an imbalance in that only six divisions could be supported by an E-MIBN headquarters, creating a disparity in the ability to conduct mission command of MI assets. These results partially support the primary research question by identifying that providing a company to a division does not provide the necessary resources to accomplish the mission.

Also, the C&E companies are not geographically located near many of the divisions they would work with, inferring that there is not a formal alignment between

the E-MIBN headquarters, the C&E companies, and the divisions. As Major Franz identified in his monograph, it is critical for intelligence units to be co-located with their headquarters to facilitate coordination and planning, as well as the flow of information.[119] In order to train together the C&E companies' personnel and equipment would have to be constantly sent to the locations in which the divisions are training. This would add to the overall cost of training and brings up the possibility that the C&E companies would have less time at home station because they would be placed on temporary duty orders to support a division's training requirements. Even though E-MIBs have been supporting divisions with this similar ad hoc relationship, it is likely a feasible method for the long-term.

Model Two: USAICoE Organizational Design Proposal

Model two is designed to test the recommendations of the draft 2019 organizational solution paper written by USAICoE. This model is designed to answer the third secondary research question, "Do the current conceptual organizational changes to the E-MIB fill LSCO Gap One?" Answering this question partially answers the primary research question by determining if a battalion size formation is necessary to satisfy the division's intelligence requirements in LSCO. The organizational design paper states that the current MI force designs and structures are not organized or equipped to conduct intelligence operations in a MDO to support the corps or divisions in LSCO.[120] The organizational design paper referenced is in a draft status and; therefore, pre-decisional.

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[119] Franz, "Beyond Desert Storm."

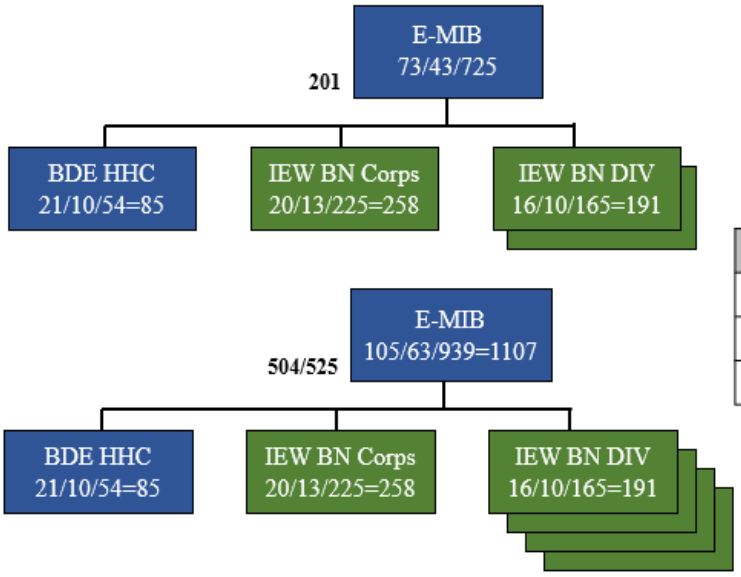
[120] USAICoE, "Brigade (E-MIB) Force Design Update (Draft)."

However, it does provide a DOTMLPF-P analysis of the proposal, which is heavily referenced. The model assumes that only eight active duty divisional IEW battalions will be able to be created to maintain a zero growth of personnel in the Army.

Organizational

This model represents a significant organizational change in the force structure, but still characterizes many of the principles mentioned in model one. E-MIBNs are experienced in creating tailored formations to support other units. This model would formalize many of the traditional ad hoc support relationships that have been conducted for the last several years into the IEW battalion roles and responsibilities. A command support relationship between eight active duty and two ARNG or USAR IEW battalions would create a formal alignment as to which battalion works for which division.

Under this concept, each brigade would be required to restructure and grow as shown in Figure 9. The 201st is organic to I Corps, which is operationally controlled by U.S. Army Pacific. The redesign would require two division IEW battalions for the 2nd and 25th Infantry Divisions (ID). The 525th is organic to XVIII Airborne Corps and would require four battalions to support 3rd ID, 10th Mountain, 101st Airborne, and 82nd Airborne Divisions. The 504th is organic to III Corps and would require four battalions to support, 1st and 4th ID, 1st Cavalry, and 1st Armored Divisions.



E-MIB	Personnel
201st	725
504th	1107
525th	1107

Figure 9. Force Design Update to the Three Active Duty E-MIBs

Source: Created by author using information from U.S. Army Intelligence Center of Excellence (USAICoE), "Expeditionary Military Intelligence Brigade (E-MIB) Force Design Update (Draft)," (Organizational Design Paper, USAICoE, Fort Huachuca, AZ, June 2019).

The divisional IEW battalions, shown in Figure 10, would each consist of a headquarter detachment, an analysis and PED detachment, and a multi-domain MI detachment. The analysis and PED detachment would support IEW targeting, ISR assessment, SIGINT technical control, and OSINT. The multi-domain detachment would conduct multi-discipline analysis, targeting support, SIGINT collection support to EW and cyber operations, IEW systems integration, and expeditionary SIGINT collection capabilities.

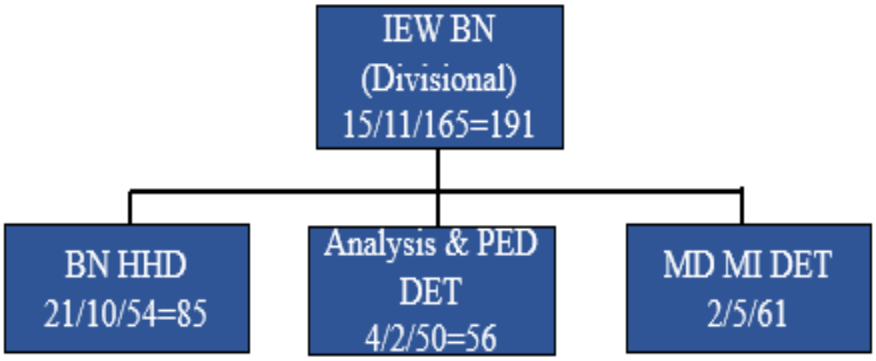


Figure 10. IEW Battalion, Company Structure

Source: Created by author using information from U.S. Army Intelligence Center of Excellence (USAICoE), "Expeditionary Military Intelligence Brigade (E-MIB) Force Design Update (Draft)," (Organizational Design Paper, USAICoE, Fort Huachuca, AZ, June 2019).

The analysis and PED detachment, shown in Figure 11, would serve to augment the division G2 to support targeting, ISR assessment, open source intelligence, and a PED platoon that would monitor the collection systems to rapidly process data and disseminate reports to the G2 and supported units. The primary difference between this and model one is the company is designed to support the targeting cycle through an IEW targeting support cell to feed the division fires section information about newly discovered targets to enable the division to put lethal and nonlethal fires on the targets.

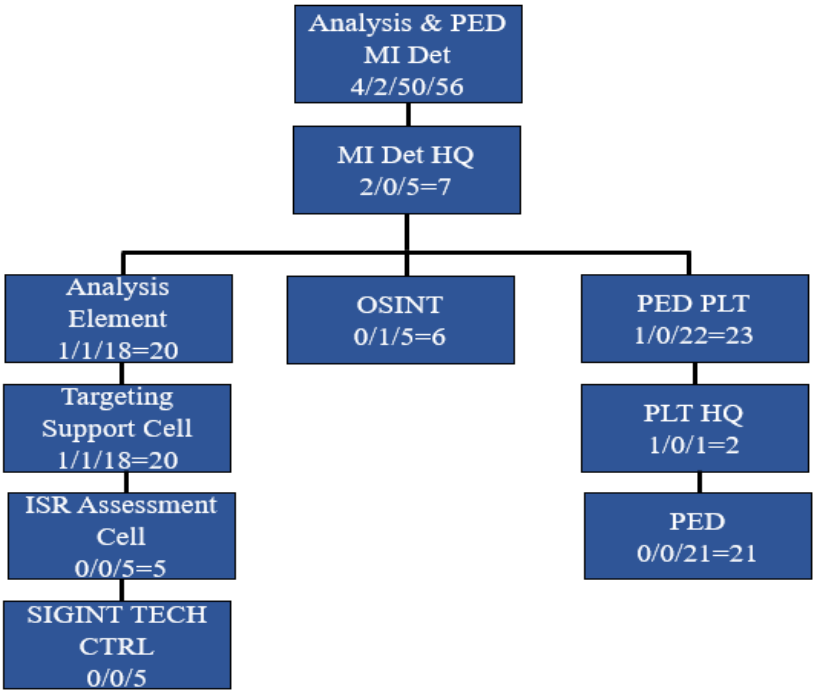


Figure 11. Analysis and PED Detachment, Platoon and Section Structure

Source: Created by author using information from U.S. Army Intelligence Center of Excellence (USAICoE), "Expeditionary Military Intelligence Brigade (E-MIB) Force Design Update (Draft)," (Organizational Design Paper, USAICoE, Fort Huachuca, AZ, June 2019).

The multi-domain MI detachment, shown in Figure 12, provides an MDO targeting cell that is designed to operate with the division's tactical command post as it moves throughout the battle space. This provides an MI targeting support presence at the division's main and forward command posts to support the targeting process. The tactical control and analysis center and SIGINT collection teams deconflict collection efforts and generate actionable intelligence by locating targets.[121] The IEW systems integration is

[121] USAICoE, "E-MIB Force Design Update (Draft)."

tasked to assist the division by maintaining the intelligence network architecture, ensuring information can pass between sensors and analysts. The tactical ground station section provides a network hub that allows analysts to process information and perform the initial analysis. The interrogation section provides limited HUMINT capabilities to the formation to assist the G2 with the interrogation of prisoners and other persons of interest.[122]

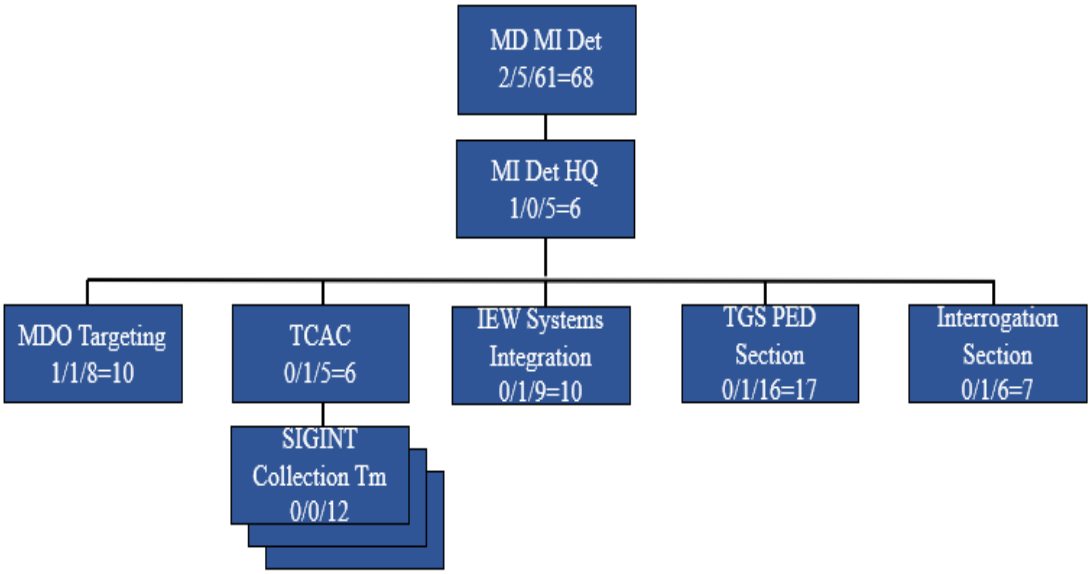


Figure 12. MI Detachment, Platoon and Section Structure

Source: Created by author using information from U.S. Army Intelligence Center of Excellence (USAICoE), "Expeditionary Military Intelligence Brigade (E-MIB) Force Design Update (Draft)," (Organizational Design Paper, USAICoE, Fort Huachuca, AZ, June 2019).

[122] USAICoE, "E-MIB Force Design Update (Draft)."

Training

The organizational design paper states that there will be minimal training implications because no new MOS tasks will need to be trained, and only mission training plans will have to be updated to reflect the new missions.[123] While this may be accurate for the individual Soldier, it is likely that many of the collective training tasks may have to change due to the new mission requirements. The IEW battalion operations section will have to become proficient in planning how to implement this force across a division's battle space, and soldiers may be required to train on making their intelligence systems interoperable with a division headquarters.

If adopted, this model would require a MET change in the E-MIB, the IEW battalions, and the companies. The implications of this is that the soldiers would in fact have their tasks change to operate in a LSCO to support targeting, collecting against peer or near-peer threats opposed to an insurgency, and integration into a maneuver plan. If these training requirements are not addressed at the outset these formations could encounter similar interoperability challenges that the CEWI battalions faced.

Materiel

The materiel analysis states that much of the required equipment can be met by the recapitalization of equipment from the USAR units that would no longer need the equipment. This insinuates that the IEW battalions would be issued the same equipment that the current E-MIBNs possess, which may not match the equipment types of the divisions they are designed to support. For example, a wheeled SIGINT vehicle following

[123] USAICoE, "E-MIB Force Design Update (Draft)."

an armored formation would have more limited maneuverability compared to the primary combat vehicles.

Leadership and Education

The leadership and education changes are assessed as moderate, and the division commanders and staffs will need to be educated on how to integrate the IEW battalions into their formations. If not addressed, this could lead to similar challenges to those LTC Gordon noted when the G3 would defer to the G2 for how to implement the CEWI battalion into the operations plan.[124] This model essentially creates two MI LTCs in a division when the IEW battalion is supporting, but this would be on a temporary basis. As with the CEWI battalion, the battalion commander would provide trained and ready forces for the G2 and G3 to utilize in implementing intelligence operations and the information collection plan. The main difference is that the IEW battalion commander's rating chain would go through the E-MIB to the corps, resulting in the two individuals not being in competition for evaluations. However, this could create a situation where the IEW commander could receive conflicting guidance from the E-MIB and the division he is aligned to support. This would create friction where the IEW battalion is not considered to be a "team player" because the commander is not following the guidance of the division as closely as he could.

[124] Gordon, "The CEWI Battalion."

Personnel

This model represents a significant shifting of personnel. The BCT MICO CoISTs would be deactivated in the active army, USAR, and USNG. Those billets would be the primary source to fill the active duty IEW battalions. As in model one, the soldiers are primarily 35F all-source analysts, but the billets would change to other MI and low-density support MOSs to man the staffs. There are currently 2559 soldiers in the three active duty E-MIBs. This proposal increases that number to 2936, an overall increase of 377 soldiers.[125] However, the operational design paper does have a discrepancy in its numbers. The E-MIB totals that were displayed earlier in Figure 9, which were derived from the operational design paper, shows a total of 2939 soldiers, an increase of 380. Regardless of this discrepancy, the overall increase shows that the no growth model in fact increases the overall number of soldiers.

This model also represents a significant officer and enlisted grade plate growth as more battalion commanders, command sergeants major, senior noncommissioned officers, and junior and mid-grade officers would be required to manage these formations. Since this is a Combined Arms Center directed course of action, it is likely that this small increase in personnel would be approved by the Army.

Facilities

The organizational design paper states that the impacts of the facilities are unknown due to this having not yet been assessed, but recommends collocating the IEW

[125] USAICoE, "E-MIB Force Design Update (Draft)."

battalions with their supported divisions.[126] At a minimum, each IEW battalion would require a battalion headquarters, three detachment headquarters, and a motor pool. The primary challenge to this is that the eight divisions receiving an active duty IEW battalion need to be identified. Following that, Foundry training sites at these locations would need to be enhanced to provide the proper classified areas for these soldiers to train. The cost analysis of that growth is beyond the scope of this paper.

Consolidating the IEW battalions with the E-MIBs at their home station would mean that the Foundry training sites could consolidate at Ft Lewis, Ft Hood, and Ft Bragg, and would likely assist with the maintenance, training, and the use of the legal authorities to conduct training and for soldiers to maintain proficiency. However, there would be substantial growth to the offices, barracks, motor pools, and intelligence training sites at these locations. Consolidating the IEW battalions at the corps locations would effectively create intelligence training hubs within the active duty Army that could negatively impact the funding for facilities throughout the other installations.

Model Two Summary

Model two is the most complex option in relation to the DOTMLPF-P variables, but it does meet the requirement of satisfying LSCO Gap One. Despite this, the model does satisfy the five intelligence capability gaps identified by USAICoE. However, it only provides active duty IEW battalions for eight of those units. If two ARNG or USAR IEW battalions were to be aligned with two active duty divisions, a deliberate process would have to be applied to ensure they are capable of training with their aligned units.

[126] USAICoE, "E-MIB Force Design Update (Draft)."

This model would require the Army's force design to be updated to reflect the new structure, mission roles, and functions of the E-MIB, the IEW battalions, and the companies. This update would result in changes in the METs at every level in the E-MIB, which would drive some change to the individual and collective training for the soldiers. It would also drive changes in leader training and education to enable the division staffs to integrate the IEW battalion into its operational planning and mission execution. If the facilities recommendation of co-locating these battalions with their divisions is adopted, it would greatly enhance the ability to integrate the MI soldiers into the divisions' training plans.

While the materiel change is relatively minimal, when the IEW battalion is formally attached it would require sustainment support from the division's assets. While the division's sustainment capabilities are designed to support attached units, the additional requirements of attaching this battalion may result in a capability gap with the available sustainment assets. This requires further analysis to identify if a division has the logistical, supply, medical, and personnel capacity to sustain this additional battalion for an extended period.

The organizational structure keeps the E-MIB chain of command intact but recommends geographically locating the divisional IEW battalions with the divisions they will be supporting. This means that the IEW battalion commander will have a day to day operational relationship with the division but will still have to satisfy the requirements of the E-MIB because the IEW battalion would not technically belong to the division. This could put the IEW commander in a precarious position where there is conflicting guidance between the parent organization with a COL and that of the division

with a Major General. From the division's perspective, this relationship would have to be formally codified to ensure that the IEW battalion could be relied upon to support the division whenever it is needed.

There are obvious comparisons between the IOSS in 1974 and the LSCO Gap Study. One of the major shortfalls of the CEWI battalion was that it was not able to fully adapt to the new generation of vehicles that were fielded to the Army in the late 1970s and early 1980s. Keeping these battalions under the E-MIB may provide the force management proponent the ability to adapt to emerging materiel innovations. This would ensure the IEW battalions have the same capabilities as the unit it supports. However, this may eventually result in the decision to model the IEW battalions' materiel issue after that of the division they support. IEW battalions supporting an armored division may require an adjustment to the modified table of equipment to simultaneously field the same new vehicle platforms as their supported units.

Model Three: An Organic IEW Battalion to the Division

Model three is designed to answer the primary research question to determine if the Army divisions need an organic MI battalion added to their force structure to collect information in the division deep area. This model is assisted by the first secondary research question, which asked how the deactivated MI battalions historically supported the division. Model three's analysis will provide the ability to compare design and force management issues with model two to determine which is the best option for the Army to adopt. This perspective applies the lessons of the CEWI battalion against the modern Army to answer the primary research question of whether the division should have an organic MI battalion.

Model three utilizes the same force structure recommended in the draft operational design paper that was the basis for model two, but with the premise that the IEW battalion is an organic unit of the division. It also uses the assumption that the active duty E-MIB headquarters are no longer needed to provide trained and ready forces because the IEW battalions are part of the divisions. Since the only remaining battalions would be the three corps IEW battalions, there are not enough subordinate units to validate the continuation of an E-MIB headquarters, resulting in those billets being used to activate the two remaining active duty divisional IEW battalions.

Organization

This model uses the same force structure used in model two except that the IEW battalion would be organic to the division instead of the E-MIB. The structure of the division only has one battalion that reports directly to the division headquarters, the Headquarters and Headquarters Battalion (HHBN). The other subordinate units align under the BCTs, fires brigade, combat aviation brigade, and the sustainment brigade.

The HHBN consists of the commander's personal staff group, coordinating staff group, and the special staff group. The HHBN commander is an LTC who is rated by the division Chief of Staff. When adding an IEW battalion to the division it could either be given the status of an individual battalion like the HHBN, or it could be placed under the fires brigade headquarters for administrative control. Placing the IEW battalion as an independent battalion under the Chief of Staff follows the historical model but may not be necessary as the fires brigade is a headquarters designed to command and control attached units in a LSCO environment. Since it has no subordinate battalions in a garrison environment, it may be prudent to assign the IEW battalion under this

headquarters for administrative purposes. Figure 13 provides a graphical depiction of the 1st Infantry Division as an example structure to depict where the IEW battalion could align.

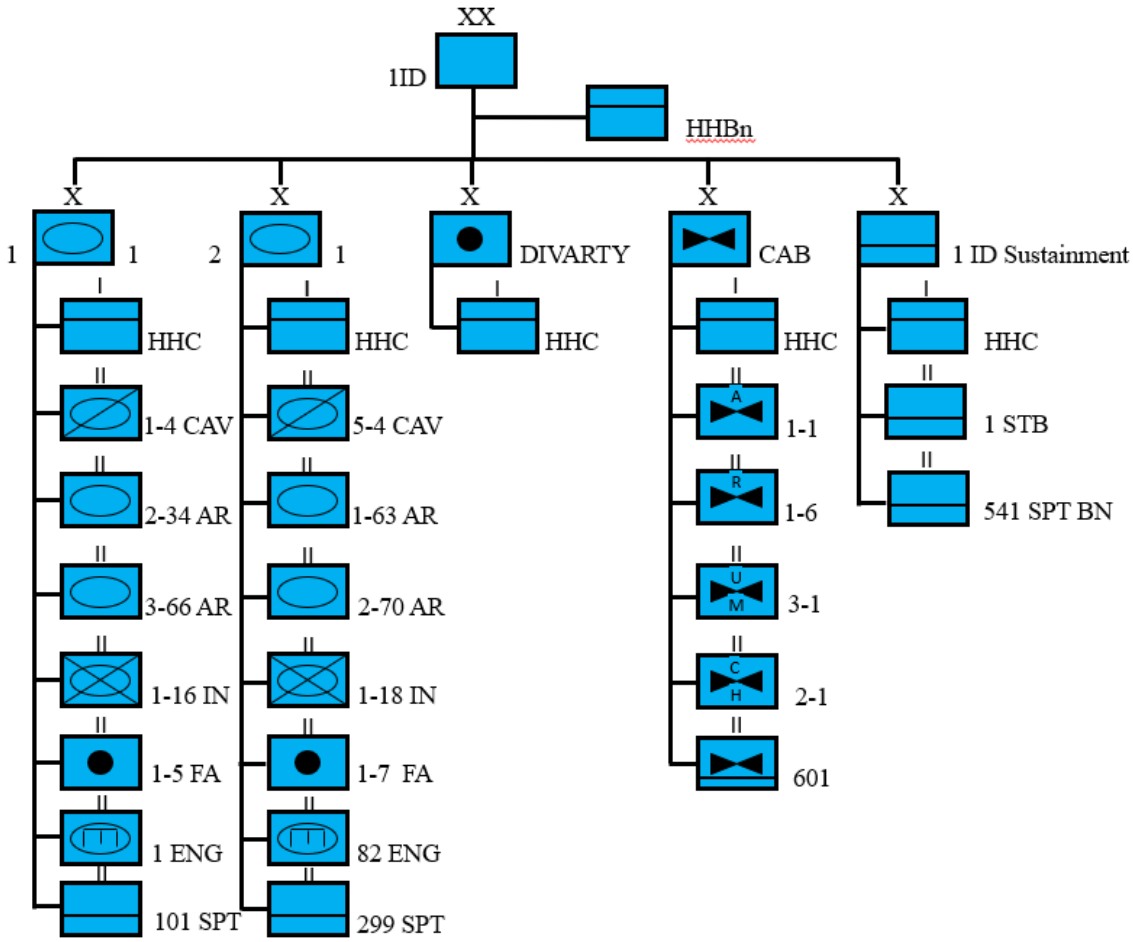


Figure 13. 1st Infantry Division Composition

Source: Created by author using information from Force Management Website, U.S. Army, 16 October 2019, accessed 26 February 2020, https://fmsweb.fms.army.mil/protected/secure/tools.asp.

The members of the G2 are currently assigned to the HHBN because they work directly for the G2. If the IEW battalion were to be activated in a division, the division

staff sections should remain in the HHBN to reinforce the G2's roles and responsibilities. The G2 is rated by the Chief of Staff and is senior rated by the Deputy Commanding General-Operations. If the IEW battalion were to be placed under the fires brigade, the fires brigade commander would be the IEW battalion commander's rater, and the Deputy Commanding General-Support could be the senior rater. This would place both individuals in separate rating chains and prevent direct competition for evaluations.

Training

While individual, team, and crew level training between models two and three would be similar, this model creates the dynamic that by simply existing in the division, the IEW battalion and the division would consistently train on how to support each other. LTC Gordon stated that one of the strengths of the CEWI battalion was that it could train with its division.[127] While also true in the second model, this framework is more effective because each division has its own battalion, which would be co-located with, and responsible to the division headquarters. The division staff would integrate the IEW battalion in their exercises which would help teach the staff how to integrate them into operations. Conversely, the IEW battalion would be able to integrate their staff in the planning process to create an experiential learning to maximize opportunities for small teams to train with maneuver elements, refine their tactics, and to create techniques, and procedures for supporting the intelligence plan. This relationship would also support the sustainment plan by identifying and practicing how to sustain the IEW battalion to help them anticipate and plan for future requirements.

[127] Gordon, "The CEWI Battalion."

Materiel

Nowak mentioned that MI units had problems keeping up with the maneuver forces due to the difference in vehicles.[128] Units created under the division should be issued similar equipment in accordance with the unit's common table of allowances to support their division's mission. "A [common table of allowances] is an authorization document for items of materiel required for common Army wide use by individuals or [modified table of equipment] . . . organizations."[129] An example would be that an IEW battalion in an armored division should be issued tracked vehicles and a light infantry division would issue light wheeled vehicles. The issuing of like equipment throughout the formation is designed to ensure that the equipment in the division have similar maneuverability, communications capability, and protection. As emerging intelligence collection technology is issued, such as the TLS-extended, USAICoE would be required to analyze whether a common vehicular platform could meet the maneuver requirements, or if the platform had to be tailored to various types of Army units.

An organic battalion would require the G4 and the sustainment brigade to identify how to supply and maintain this equipment in garrison and the battlefield. The second and third order effects of this would allow the G4 to identify if there are any equipment shortfalls that need to be corrected to sustain the battalion. This forcing mechanism also holds true for the other types of medical and personnel sustainment within the division.

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[128] Nowak, "Division Intelligence."

[129] Headquarters, Department of the Army (HQDA), Army Regulation AR) 71-32, *Force Development and Documentation Consolidated Policies* (Washington, DC: Government Printing Office, March 2019), 30.

While sustainment challenges would exist, it would be the responsibility of the G4 and his subordinate elements to identify and design methods to fix the issues.

Leadership and Education

This model identifies moderate changes to the leadership and education systems currently in place. As with the first two models, division commanders and staff will need to be trained on how to integrate the IEW battalions into their formations. In order to prevent a recurrence of LTC Gordon's observations that the G3 would delegate implementing the CEWI battalion to the G2, the divisions' operations staffs would need to be trained on how to implement these capabilities into the maneuver plan. This includes rehearsals and exercises for incorporating the collection manager and IEW commander in the planning process and generating standard operating procedures within the units to streamline operations.

Personnel

This model assumes that the E-MIB headquarters would no longer be required to provide trained and ready forces to support FORSCOM units. The deactivation of these three headquarters could create 273 additional billets and significantly lowers the overall grade plate in the Army. Three COLs and sergeants major, at least 21 majors, and many other senior noncommissioned officers would not be required to fill brigade staff positions. 191 billets are required to fill a divisional IEW battalion, leaving 109 billets that have to be taken from somewhere else or added to the Army's personnel authorization. A likely solution is to take these billets from the USAR to meet goal of no growth, with the justification being that if every division has an IEW battalion there is

less likelihood of the reserves having to provide individual soldiers to augment the active force.

Facilities

This model would require a moderate growth to the facilities to the locations of the ten active deployable divisions. At a minimum, each IEW battalion would require a battalion headquarters, three detachment headquarters, and a motor pool. Each battalion would also require access to classified area for them to store their sensitive materials and to train on their systems. While these duty stations maintain classified training areas, they would likely need to be modified to account for the additional intelligence personnel and increased communications bandwidth to account for their computer systems.

Model Three Summary

Model three satisfies the gaps identified in LSCO Gap One but presents its own strengths and weaknesses across the DOTMLPF-P domains. The primary difference is this model provides each active duty division with its own IEW battalion. The IEW battalions would maintain the same organizational structure, but it would have a clear chain of command and support relationship with its organic headquarters. This would provide a stable command support relationship for the commander and the staff. It would also guarantee the division would be able to integrate and train with this battalion without competing requirements from an external brigade headquarters. However, like the MICOs do not currently have a LTC responsible for their training, the IEW battalions would not have a COL responsible for overseeing theirs.

The materiel issued to the IEW battalion would be equivalent to the maneuver capabilities inherent in the parent division. An armored division's IEW battalion modified table of equipment would be nested to theoretically provide similar maneuverability and rate of speed on the battlefield as that of the maneuver force. By assigning the IEW battalion to the division, each individual division would be able to identify any gaps in sustaining their new unit and be able to provide solutions to fill that gap. It is likely that a light infantry division would have different sustainment challenges from an armored division and making the battalion part of that unit would help identify the challenges that need to be remedied to make the organization more effective.

Model three also deconflicts some of the tensions between the IEW battalion commander and the G2 that were identified in the literature review. The battalion commander would provide trained and ready forces to the division's intelligence operations but would be rated by the fires commander and the Deputy Commanding General-Support. The G2 would be able to coordinate with the G3 and the collection manager to implement those forces across the battlefield but would be rated by the Chief of Staff and the Deputy Commanding General-Operations.

Evaluation

Model one answers the second secondary research question and shows adding additional C&E companies to the force structure does not fully meet criteria one through five. The analysis of model one shows that a minor change to the E-MIB structure will not effectively fill LSCO Gap One. This partially proves the primary research question by determining that a company does not have the capability or capacity to fill the required gaps. The model does not provide the necessary personnel, equipment, or training that is

necessary to meet the first five criteria. This shows that the current ad hoc arrangement of providing tailored packages to divisions will not likely work in LSCO. These shortcomings have the potential to lead to an inability to provide effective intelligence support to the division, which could lead to increased casualties, or battles lost. However, it does not prove or disprove that this framework would be ineffective in the Army's other three strategic roles of shape, prevent conflict, and consolidating gains.

Model two answers the third secondary research question by identifying that this proposed change to the E-MIB would fill LSCO Gap One in the division. However, two of the divisions would be limited by receiving USAR or ARNG IEW battalions, which could have an overall impact on training and readiness because, without mobilizing the units, they would only be reasonably available for two weeks in the year to train. Model two is likely to be more flexible to change the personnel and materiel in its structure to address emerging capabilities and requirements but is weak on sustainment and would have a complex command support relationship with its division. Additionally, this model would maintain the status quo by leaving the E-MIB as brigade headquarters that would provide trained and ready battalions to the Army divisions. To establish a working relationship between the IEW battalions and their parent divisions, they must be located at the same duty station. Units geographically separated from their supported headquarters will not have the same opportunities to build working relationships, train collectively, or build trust if they cannot be present at all the training events.

Model three follows the path of the deactivated CEWI battalions and has its main strength in providing an organic battalion to each division. However, it also relies on the assumption that if the IEW battalions are activated in the divisions, the E-MIB no longer

provides a unique and necessary function for the Army. Model three relies heavily on the history, lessons, and experiences of the CEWI battalion to justify this option, which has proven successful in Desert Storm and the initial stages of Operation Iraqi Freedom.

Table 2. Evaluation

	Evaluation Criteria	Model 1	Model 2	Model 3
1	Conduct multi-domain collection (deep sensing).	/	+	+
2	Conduct MDO ISR management	-	+	+
3	Conduct MDO target development.	-	+	+
4	Conduct Support to Combat Assessment/BDA	-	+	+
5	Conduct Mission Command of MI Assets	/	+	+
6	Flexibility to Change Structure	+	+	/
7	Self-Sustainment	-	-	+
8	Simplicity	+	/	/
+ Capable / Semi-Capable - Not Capable				

Source: Created by author.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Findings

The primary research question is designed to identify if the active duty Army divisions need an organic MI battalion added to their force structure to collect information in the division deep area. The research determines that the division likely requires a battalion size organization, but it does not explicitly prove that the battalion should be part of the E-MIB or the division. Despite the parent organization, the research supports the USAICoE recommendation that the division IEW battalions be co-located with their supported divisions. Lieutenant General Franks' comments during the after-action review of Desert Storm validates this recommendation when he said, "Never hinge the success of a combat operation on sensors you don't own."[130] Model two does not completely satisfy this requirement because two divisions would be reliant on USAR or ARNG units to meet their intelligence requirements. Model three satisfies this requirement, but is reliant on the assumption that the E-MIB headquarters no longer provide a unique and necessary function to the corps.

If the Army assigns the IEW battalions to the divisions, it will leave only one Corps IEW battalion in the E-MIB. Model three is reliant on the assumption that this structural change would negate the need to have E-MIBs in FORSCOM, as a brigade headquarter generally does exist with only one subordinate battalion, unless there is a

[130] Frederick M. Franks Jr., (After Action Review Comments, Al Bwsayah, Iraq, March 1991).

specified purpose for it to exist. If the IEW battalions should be assigned to their divisions, as recommended in the organizational design paper, would the corps IEW battalion provide sufficient support to the corps to negate the need of the E-MIB headquarters? Regardless, the necessity of the E-MIB is a long-term question outside of the scope of this research.

The common themes that arose in this study led to multiple conclusions about the Army's direction in incorporating LSCO doctrine into force management. Primarily, this research validated the assumption that analyzing the lifespan of the divisional MI battalions from the post-Vietnam era to Operation Iraqi Freedom would provide a valid case study. The units' complex history identified potential strengths and weaknesses of providing battalion size elements to support the divisions against peer and near-peer threats. However, the deep battle area of AirLand Battle and the division deep area in modern LSCO provide different challenges that cannot be adequately compared until the next generation of materiel is fielded to the Army.

When the CEWI battalions transitioned from the active defense to AirLand Battle they generally had the technological capability to support information collection deep battle. This is not the case with the current force management challenges. The emerging SIGINT collection capabilities being developed in the TLS family of vehicles has not transitioned into the Army's inventory, and therefore cannot be adequately assessed to support any force design updates. If the Army cannot develop systems to collect information in the division deep area before the IEW battalions are activated, there will be units available without the technical capability to complete their required tasks. Given

this reality, the successful development of emerging technology and materiel should be a prerequisite to activating the IEW battalions.

If approved, it will take several years to activate the IEW battalions and reach full operational capacity. During this time, these new units will require assistance from an MI headquarters to activate and become functional. This again reflects a historical challenge in that the CEWI battalions were created before the shift to AirLand Battle and may have required organizational changes to maintain their capabilities during that doctrinal shift. The analysis of the CEWI battalion shows that if the Army experiences another major doctrinal shift after the IEW battalions are activated, they may not be able to rapidly adapt to their organizational structures and materiel needs to the new requirements. The E-MIB model theoretically simplifies any necessary changes to an IEW battalion because any personnel, organizational, or materiel changes will not create change within the divisions' themselves. This provides USAICoE, as the force proponent for MI, the ability to assume some levels of risk when the IEW battalions are activated, with the understanding that these organizations can be quickly changed in the future.

Recommendations

As with the CEWI battalions, the division IEW battalions will likely experience challenges that may require changes to their structure and materiel with whatever higher headquarters they are assigned to. The Army's development of new technological capabilities, such as long-range precision fires and future vertical lift, may once again change battlefield dynamics and require the division IEW battalions to go through a transformation to maintain their relevance. While model two is a directed change from the Combined Arms Center, it may serve as an effective starting point that could then

lead to further force modernization. These unknown challenges, coupled with the provided research, show that model two is the most effective way for the Army to begin filling LSCO Gap One.

After the units reach full operational capacity, the army should examine if the active duty E-MIB headquarters provides a unique and necessary function to the Army and the corps. If they do, model two may be a long-term solution to this problem. If they do not, the IEW battalions should be assigned as organic battalions to the divisions and the deactivated E-MIB headquarters billets used to help activate the two additional IEW battalions. This would standardize the intelligence corps presence throughout FORSCOM and ensure that every division has the same capabilities in LSCO.

Though not the primary focus of this paper, it would be beneficial for the ARNG and USAR IEW battalions to remain under the E-MIB structure, regardless if the active duty Army assigns them to the divisions. These units contend with significant time constraints and resources, and are restricted in the amount of unit training assemblies they can use to develop and maintain their intelligence skillsets.[131] There is only enough allotted time to keep them proficient on basic Soldier skills and they must be fully mobilized to receive the time and resources to become proficient in their MOS and collective tasks. If the IEW battalions are activated in the ARNG and USAR, keeping them under an E-MIB command would streamline their limited training days and provide one centralized source for utilizing foundry and other MI specific training.

[131] HQDA, *Army Intelligence Training Strategy*.

Proposals for Future Research

Multiple observations and challenges fell out of the scope of this research. Although this research provided insight into future challenges of the organizational design of MI formations, they require further research to identify their validity. First, is it an optimal force design to align divisions with battalions in an external support role? If this is in fact a unique command and support relationship for a battalion within FORSCOM then the impacts should be studied to evaluate its successes and failures. Evaluating this dynamic could help drive the future structure of Army units.

Second, does the division have the sustainment capacity to support external units in LSCO, and if not, what changes to their structure must be implemented? Given that LSCO is not a BCT centric fight, it is likely that divisions will receive an increased number of external units to support their efforts. FM 3-0 states that divisions can be assigned from two to five BCTs in LSCO, which is a considerable variance in regard to sustainment requirements.[132] Adding additional external battalions to the formation would only increase the sustainment obligations across all classes of supply.

Third, does the E-MIB headquarters provide the Army a unique and necessary function? Are they even needed in the modern force and is their existence the reason why the FDU recommends adding MI battalions to the EMIBs? There are currently eight COL MI billets in FORSCOM, three E-MIB commanders, four Corps G2s (including V Corps), and the FORSCOM G2. Removing the E-MIBs would take away three of the eight MI COL billets in FORSCOM. While this seems like a dramatic shift, there are

[132] HQDA, FM 3-0.

currently 78 MI COL billets in the Army. Eliminating these three billets accounts for less than a four percent reduction and would not have a major influence on the presence of senior intelligence officers throughout the force.

Summary

Carl von Clausewitz said that, "War is the realm of uncertainty; three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty. A sensitive and discriminating judgment is called for; a skilled intelligence to scent out the truth."[133] While the fog of war will exist in any conflict, the U.S. has made deliberate attempts to mitigate its impacts on operations by increasing the effectiveness of intelligence collection. The ability to fight for intelligence in a contested environment and collect information in the division deep area will enable commanders to locate their enemies and act against them from a position of strength. Filling LSCO Gap One with units capable of providing their commanders with deep sensing is part of the foundation of this transformation effort.

Predicting the Army's future requirements is a constant process in force management because it is linked to many inconsistent factors. While filling the LSCO gap is currently a major priority for the Army, world events may force the Army to shift back to a COIN based structure in the next conflict. Even if the Army fields the required materiel and creates capable organizations to fill the gap in the near-term, their effectiveness will be mitigated over time due to unforeseen circumstances. The historical

[133] Carl Von Clausewitz, On *War,* trans Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 101.

analysis of the CEWI battalions show that the Army intelligence corps must have the wherewithal to identify and address its doctrinal, organizational, training, and materiel shortcomings as soon as they arise. Only this constant vigilance and flexibility will ensure that the Army's intelligence units will remain capable of fulfilling its requirements as a WFF to the maneuver commanders in combat.

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