

TRANSFORMING DOCTRINE AND ORGANIZATION
TO MEET THE INTELLIGENCE, SURVEILLANCE,
AND RECONNAISSANCE REQUIREMENTS OF
THE BRIGADE COMBAT TEAM COMMANDER

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General Studies

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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

TRANSFORMING DOCTRINE AND ORGANIZATION TO MEET THE INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE REQUIREMENTS OF THE BRIGADE COMBAT TEAM COMMANDER, by Aaron D. Sammons, 104 pages.

The metamorphosis of the United States Army's tactical Military Intelligence (MI) organization and doctrine since 1976 has been remarkable. Transitioning from a conglomerate of capabilities borrowed from disparate organizations, MI units became holistic MI organizations. Equipped with increasingly robust collection capability MI became ever more capable of all-source intelligence production. Change continues through the provision of MI capability to lower echelons.

As collection capability in the brigade combat team (BCT) increased collective MI experience and leadership in planning and direction of collection decreased. While intelligence, surveillance, and reconnaissance (ISR) assets and soldiers transferred from the division echelon to the BCT, the MI collective experience and leadership did not. Additionally, a 30-year old inconsistency concerning staff authority in collection direction continues. With an increasing ISR capability, reduction in collective MI experience influencing BCT ISR, and an ongoing rift in collection direction authority, does the Army model for ISR meet the needs of the BCT commander of the future?

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ACRONYMS

ACE	Analysis and Control Element
ACofS	Assistant Chief of Staff
ACOS	Assistant Chief of Staff
ACT	Analysis and Control Teams
AO	Area of Operations
AOE	Army of Excellence
ARFOR	Army Forces
ASA	Army Security Agency
ASPS	All-Source Production Section
AUSA	Association of the United States Army
BCT	Brigade Combat Team
BfSB	Battlefield Surveillance Brigade
CAB	Combined Arms Battalion
CAC	Combined Arms Center
CADD	Combined Arms Doctrine Directorate
CALL	Center for Army Lessons Learned
CCIR	Commanders Critical Information Requirements
CEWI	Combat Electronic Warfare and Intelligence
CM&D	Collection Management and Dissemination
CMO	Civil Military Operations
COS	Chief of Staff
DAWE	Division Advanced Warfighter Exercise
DISE	Deployable Intelligence Support Element

DOD	Department of Defense
DS	Direct Support
EW	Electronic Warfare
EXFOR	Experimental Force
FAD	Final Approved Draft
FBCT	Future Combat System Brigade Combat Team
FCS	Future Combat System
FD	Final Draft
FFIR	Friendly Forces Information Requirements
FLOT	Forward Line of Troops
FM	Field Manual
FMI	Field Manual Interim
FMS	Force Management System
FOUO	For Official Use Only
FRAGO	Fragmentary Order
G2	Intelligence Officer, General Staff
G3	Operations Officer, General Staff
HBCT	Heavy Brigade Combat Team
HPT	High Payoff Target
HUMINT	Human Intelligence
IBCT	Infantry Brigade Combat Team
IEW	Intelligence and Electronic Warfare
IMINT	Imagery Intelligence
IWSE	Intelligence and Electronic Warfare Support Element
IO	Information Operations

IOSS	Intelligence Organization and Stationing Study
IPB	Intelligence Preparation of the Battlefield
IR	Information Requirement
ISR	Intelligence, Surveillance, and Reconnaissance
J7	Joint Experimentation, Transformation, and Concepts Division
JEL	Joint Electronic Library
JNN-N	Joint Network Node-Network
JRTC	Joint Readiness Training Center
METT-TC	Mission, Enemy, Terrain and Weather, Troops and Support Available, Time Available, Civil Considerations
MI	Military Intelligence
MICO	Military Intelligence Company
MM&D	Mission Management and Dissemination
MTOE	Modified Table of Organization and Equipment
NRT	Near Real Time
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OIL	Observations, Insights, and Lessons Learned
OPCON	Operational Control
OPLAN	Operation Plan
OPORD	Operation Order
OPSEC	Operations Security
OTOE	Objective Table of Organization and Equipment
PIR	Priority Intelligence Requirement
QDR	Quadrennial Defense Review

R&S	Reconnaissance and Surveillance
RSTA	Reconnaissance, Surveillance, and Target Acquisition
S2	Intelligence Officer, Brigade, Regiment, or Battalion Staff
S3	Operations Officer; Brigade, Regiment, or Battalion Staff
SBCT	Stryker Brigade Combat Team
SIGINT	Signals Intelligence
SIGSEC	Signal Security
SOP	Standing Operating Procedure
TCAE	Technical Control and Analysis Element
TRADOC	Training and Doctrine Command
T-RAP	TRADOC Remedial Action Plan
US	United States
U.S.	United States
USAICS	United States Army Intelligence Center
USAIC&FH	United States Army Intelligence Center and Fort Huachuca
WARNORD	Warning Order
WFF	Warfighting Functions
WIN-T	Warfighter Information Network-Tactical
XO	Executive Officer

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CHAPTER ONE

INTRODUCTION

ISR and the BCT

The metamorphosis of the United States Army's tactical military intelligence (MI) organization and doctrine since 1976 has been remarkable. Transitioning from a conglomerate of capabilities borrowed from disparate organizations, MI units became holistic MI organizations. Equipped with increasingly robust collection capability eventually MI became ever more capable of all-source intelligence production. This metamorphosis continues through the provision of MI capability organically to lower and lower echelons. This study focuses on MI capability in the Brigade Combat Team (BCT).

Collection capabilities within the Stryker Brigade Combat Team (SBCT) are more robust than previous combat arms brigades. Although intelligence assets in the Heavy Brigade Combat Team (HBCT) and Infantry Brigade Combat Team (IBCT) may not be as robust as SBCT, they are significantly more capable of organic collection than their previous incarnations. Increasing this collection capability was not without challenges.

Whether discussing the SBCT, HBCT, or IBCT (hereafter referred to collectively as BCT) the organic collection capability is roughly equivalent to the Force XXI Division of the 1990s. This collection capability increase in the BCT occurs simultaneous with a decrease of collective MI experience and leadership in planning and direction of collection assets. This collective experience and leadership was in the command and staff of the division MI battalion from 1976 until 2004. While collection assets and soldiers transferred from the division echelon to the BCT, the MI collective experience and leadership did not. In addition to a reduction in the relative number and grade of MI

professionals planning the implementation of collection assets, a 30-year old inconsistency concerning staff authority in directing collection continues. With an increasing collection capability, reduction in collective MI experience influencing the BCT MI Company (MICO), and an ongoing rift in collection planning and direction authority, does the Army model for intelligence, surveillance, and reconnaissance (ISR) meet the needs of the BCT commander of the future?

This study seeks to ascertain the ISR needs of the BCT commander of the future. While focusing on the centrality of the commander, this study confines its scope on the staff responsibilities and requirements concerning the planning and direction of collection, or ISR. By understanding how the current MI doctrine and organization evolved, and comparing current doctrine and organization with the stated requirements and expected capabilities of the future force, this study will identify a clear plan to improve ISR in the BCT.

Military intelligence doctrine and organization are reciprocal. Just as technical innovations and weapons improvement drives change in combat arms doctrine and organization, so too with MI. However, many improvements within MI had more to do with effectively organizing existing capabilities than increasing technical capabilities. This study begins with an evaluation of tactical MI doctrinal and organizational evolution while avoiding the inherently detailed discussions concerning technical aspects of ISR [collection] asset capabilities.

Regarding the Organization of this Study

To facilitate ease of reading, the first chapter presents a chronological discussion on Army of doctrine affecting ISR operations in the BCT. With few exceptions, a

chronological discussion of organizational evolutions affecting ISR operations in the BCT parallels the doctrinal discussion. Although the document focuses on the BCT, many of the contributing documents are division echelon specific. In several instances, division staff acronyms are used to maintain continuity with the cited references. Collection, as a term, is largely synonymous with ISR. Where the two are synonymous the term appropriate to the cited reference is used, along with a bracketed accompaniment of the other term. References to articles discussing doctrinal and organizational changes are included in Chapter 2. These references, as well as select draft doctrine, help to articulate Army thoughts and mindsets contributing to evolutionary changes in doctrine and organization. Illustrations in Chapters 1 and 2 facilitate the readers association between doctrinal and organizational evolutions.

This study is purely academic. The analysis is scholastic in nature. Chapter 3 describes how the facts presented in Chapter 1 and 2 contribute to critical, logical lines of discussion. Chapter 4 is the actual analysis of those lines and includes mitigating factors as well. Chapter 5 presents conclusions, courses of action, counterarguments, and recommendations for further study concerning ISR derived from thesis and antithesis of Chapter 4.

Looking at the Past

Collection Management and The Active Defense (1972-1981)

Active Defense Doctrine

The Army's 1976 edition of FM 100-5, *Operations* ushered in an era of prominence for the Army operations manual as a driving force for subsequent doctrine, as well as other facets of Army development. Paul H. Herbert writes, "The 1976 version of

FM 100-5 was unlike any of its several predecessors. First, it represented a new role for military doctrine as a key integrating medium for an increasingly complex military bureaucracy.... The manual attempted to rationalize everything the Army did, from training recruits to designing tanks, in terms of how the Army intended to fight” (Herbert 1988, 1).

As much of an impact as *Operations* (1976) had, it did not prompt immediate change in two doctrinal manuals particularly important to ISR; they were FM 101-5 *Staff Officer’s Field Manual Staff Organization and Procedure*, 1972 and FM 30-5, *Combat Intelligence*, 1973. *Staff Officer’s Field Manual Staff Organization and Procedure* (1972) provided guidance for the organization and conduct of Army staffs. It identified both the staff responsibility and authority. Specific to this study, the *Staff Officer’s Field Manual Staff Organization and Procedure* (1972) articulated both staff coordination and staff supervision requirements in regards to collection [ISR].

The Army publication FM 101-5, *Command and Control of Combat Operations*, was a Final Approved Draft (FAD) in July 1977. *Command and Control of Combat Operations* (FAD 1977) followed the publication of *Operations* (1976) and detailed the responsibilities of the coordinating, or principal staff, in Active Defense doctrine. It is clear the intelligence officer was the principal staff officer responsible for planning and direction of collection for the commander in the active defense.

Among other discussions, *Command and Control of Combat Operations* (FAD 1977) describes delegation of authority. “The commander delegates authority to the staff or to a special staff officer to take action on matters as established within his command policies.” “In some cases the commander may delegate authority to staff officers to issue

plans and orders without his personal approval” (*Command and Control of Combat Operations* FAD 1977, 3-17). But, this specificity in delegation by the commander was not regularly necessary because the intelligence officers essential responsibilities in regards to collection were outlined clearly in *Operations* (1976).

Among other responsibilities the G2 was responsible to the commander on all matters concerning intelligence, as well as advising all “...other staff officers on all intelligence phases of the functional areas for which they are responsible. This assistance includes the preparation of plans or orders.” *Command and Control of Combat Operations* (FAD 1977) clearly identifies additional coordinating staff activities of the G2 including “Preparing plans, orders, and requests for target acquisition, combat surveillance and reconnaissance, and other intelligence-collection activities” (*Command and Control of Combat Operations* FAD 1977, A17-A18). William Harmon reports that the “G2 directs the collection effort but also states the “collection manager who is usually the G2 or the operations officer at the division level” (Harmon 1980, 23). Ralph Burton records that the Collection Management and Dissemination (CM&D) element performs the collection management function “as directed by the G2” (Burton 1981, 10). This illustrates a discrepancy between early concepts and their precise application because of unclear or absent collection doctrine.

During the period of Active Defense doctrine, 1976 to 1981, the Army’s premier intelligence manual was FM 30-5, *Combat Intelligence*, 1973. Like *Staff Officer’s Field Manual Staff Organization and Procedure* (1972), *Combat Intelligence* (1973) preceded the development and publication of *Operations* (1976). *Combat Intelligence* (1973) discussed the analysis of enemy, terrain, and weather. It also discussed the collection

plan, with a collection plan matrix very similar to those used through the later development of the 34-2 series of collection management manuals. Subsequent to *Operations* (1976), and like *Staff Officer's Field Manual Staff Organization and Procedure* (1972), there was no updated *Combat Intelligence* (1973) for the Active Defense. In fact, *Combat Intelligence* (1973) remained the guiding intelligence doctrine until 1984.

July, 1972 FM 101-5 <i>Staff Officers Field Manual Staff Organization and Procedure</i>	October, 1973 FM 30-5 <i>Combat Intelligence</i>	July, 1976 FM 100-5 <i>Operations</i>	July, 1977 FM 101-5 (FAD) <i>Command and Control of Combat Operations</i>
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Figure 1. Key Doctrinal Manuals in ISR Development 1972-1981

It is important then, to recognize that activities resembling intelligence preparation of the battlefield (IPB) existed in intelligence doctrine prior to 1976 but not as the formalized and standardized process codified doctrinally in 1989. In his article, George A. Gaun states that the commander of the United States Army Intelligence Center and School (USAICS) approved the formal concept of IPB on 13 November 1975. IPB as a formal and standardized concept, developed in conjunction with FM 100-5, and subsequently manifested as a training circular. Referencing the pre-publication draft of *Operations* (1976) Gaun says, "IPB has its doctrinal base in draft FM 100-5 OPERATIONS, Chapter VII, Intelligence. Chapter VII, succinctly stated, is the "mission statement" of tactical intelligence support to the commander" (Gaun 1976, 29). Gaun

notes in his article the importance of IPB in supporting collection management, “The Tactical Surveillance Officer can use this as a basis for determining the effectiveness of area collection coverage and thereby maximize the use of his resources by directing them against priority targets and areas” (Gaun 1976, 32-33). This is relevant because the formal IPB process did not doctrinally manifest in a MI field manual until 1984; therefore, a clear correlation between IPB and collection management for Active Defense operations was not doctrinally apparent.

MI Organization in the Active Defense

The year 1976 is noteworthy in the development of MI organizations. Don Gordon notes that “Prior to 1962, Military Intelligence was a reserve corps, not a branch of the U.S. Army” (Gordon 1979, 22-28). By 1974 MI, although recognized as under-sourced, was a significant contributor to Army operations. Thomas H. Felts cites the 1974 Intelligence Organization and Stationing Study (IOSS), which concluded that each division and corps required its own organic capabilities to conduct electronic warfare and intelligence (Felts 1998, 8). Jeffery Tom and Ronald Tom note that Chapter 2 of the final IOSS articulated the “separateness” of intelligence and signal organizations at echelons below corps as a “weakness of the existing system” (Tom and Tom 1979, 16). In 1976, the Army’s first Combat Electronic Warfare Intelligence (CEWI) battalion was organized within the 2nd Armored Division, Fort Hood Texas. In his 1983 article, William E. Harmon recalls his personal involvement in the formation of the 552nd CEWI. “Prior to the formation of the 552d CEWI Battalion, the division was supported by the Combat Intelligence Company (Provisional) which was also the Army test unit. The Combat Intelligence Company contained only a portion of the intelligence gathering assets which,

by doctrine, were to operate in the division area of operations in combat.” Having no organic signals intelligence (SIGINT), or electronic warfare (EW) capability, the division had to borrow assets from the Army Security Agency (ASA) battalion and the Signal Security (SIGSEC) Command. Because the signal and EW assets belonged to other organizations, the perception of ASA and SIGSEC responsiveness to the division commander’s requirements was not ideal (Harmon 83, 4).

The formation of the CEWI battalion was pivotal for the Army. It provided division commanders a subordinate unit focused on the directing the collection of information to satisfy the commander’s information requirements within and around his area of operations (AO). It also provided a single point of contact for conducting EW; simultaneously supported by SIGINT while reducing confliction with protected or friendly signals.

The CEWI battalion provided the MI commander with necessary organic assets to support the division. The MI commander was able to task assets to collect information in a timely manner. “While the test results and experience have dictated certain organizational modifications and changes, the concept of consolidating all intelligence assets under a single commander at division level is sound and represents the key to successful tactical intelligence operations on future battlefields” (Harmon 1978, 38).

William Rolya reinforces Harmon’s assessment. “As intended the Army has better control of its intelligence resources through organizational restructuring; has realized the potential for synergistic interactions among previously fragmented collection disciplines of signals, imagery, and human intelligence; and as a spinoff benefit, has begun to develop a better ability to assess the performance of the system in

accomplishing its primary mission—supporting Army decision-makers” (Rolya 1979, 11).

	Consolidation of collection assets recommended	Consolidation of MI assets at BN with like disciplines in each company.		Consolidation of MI assets at BN with like multi-discipline companies.	
MICO (Prov)	1975 Intelligence Organization and Stationing Study	1976 552 CEWI CEWI Bn (Prov)	June, 1977 313 th CEWI Bn (Prov)	November, 1979 CEWI Bn per TOE Series 34	November, 1980 313 th CEWI Bn with DS Cos (Prov)

Figure 2. Key Organizational Changes in ISR Development

While providing the MI commander the necessary assets and authority to direct collection, the CEWI organization freed the G2 to focus on analysis and intelligence production. More importantly, the G2 could focus on advising the commander.

Referencing the division G2 Rolya states:

Traditionally, these staff officers have been unduly burdened with the added responsibilities of operational management of intelligence and/or security components of subordinate units or dedicated intelligence and/or security units. This fact has constrained the intelligence staff officer in his ability to become the commander’s advisor and agent in the use of intelligence responsive to that decision-maker’s needs for intelligence pertinent to the current and future time frames (Rolya, 1979, 51).

The CEWI battalion changed little between 1976 and 1981. In an early CEWI article, Harmon illustrates the key collection organizations within the battalion, highlighting differences between the CEWI Battalion (Test) and the CEWI Battalion (Provisional). Both the test and provisional CEWI battalions provided the division G2 with a robust G2 augmentation organization consisting of an All Source Production

Section (ASPS), Mission Management, and Dissemination (MM&D) section, Prisoner of War Interrogation section, Imagery Interpretation section and Operations Security (OPSEC) section. Additionally, the CEWI B Company, or the Ground Surveillance Company, organized originally with functional platoons then with mixed asset platoons to facilitate habitual relationships with supported brigades. Within the CEWI battalion, “the S3 is the focal point for all incoming and outgoing taskings...” but mission management performance was by a CEWI battalion S3 section augmenting the division G2 (Harmon 1978, 38-40).

By 1979, the 313th CEWI Battalion (Provisional) introduced the development of direct support companies rather than support platoons from the B Company. This enabled habitual support to subordinate brigades with collection assets, service support assets, and the company chain of command as well (Gordon 1979, 24). The Division 86 CEWI Battalion Modified Table of Organization and Equipment (MTOE) did not follow the 313th proposal for company organization. Further, it refined some of the organization and nomenclature of elements augmenting the division G2. The All Source Analysis Center, consisting of the CM&D section, performed the collection tasking function for the division. The CM&D performed the collection management function “as directed by the G2” (Burton 1981, 10).

Even though the CEWI battalion promised significant effectiveness over previous MI organizational options, it remained under resourced. In 1979, only two CEWI battalions were operational. The 1980s promised additional growth as each division was to form a CEWI battalion (Gordon 1979, 23).

Collection Management and AirLand Battle (1982-2000)

A great deal of doctrinal and organizational change occurred in the 18 years of AirLand Battle. The necessity to formulate a doctrine and organization capable of fighting the Soviet Union drove doctrine and organization in the first nine-years of AirLand Battle. With the disintegration of the Soviet Union and the end of the Operation Desert Storm, the year 1991 marked a second period of AirLand Battle. This period was one of force-projection. Although organization and doctrine are reciprocal, they are not necessarily timely in reacting to changes in one or the other; this latency was apparent in certain aspects of the Active Defense period and again becomes apparent in the period of AirLand Battle.

AirLand Battle Doctrine

AirLand Battle emerged doctrinally in 1982 with the publication of FM 100-5, *Operations*. *Operations* (1982) focused on defeating the Soviet threat. Specifically, defeating the Soviet first echelon forces in close battle while simultaneously engaging the second echelon forces in depth. John Romjue opines that AirLand Battle presented a battlefield architecture having a “deeper physical dimension, a time dimension, and an airland dimension more critical now than ever before...” In order to attack second echelon forces commanders had to know where those forces were (Romjue 1984, 3). The publication of *Operations* (1982) prompted the revision of FM 101-5. *Staff Organization and Operations* appeared as a final draft (FD) in 1982 and eventually published under the same title in 1984.

Intelligence production and dissemination supporting AirLand Battle was predominantly a top down process by design. Divisions provided the intelligence

estimates to subordinate brigades. Accompanying mission orders, the division intelligence estimate invariably included the enemy's most likely and most dangerous courses of action. These enemy courses of action were often a text format accompanied by a graphic situation template—a doctrinal template adjusted for terrain, weather, and the current disposition of the enemy. The subordinate brigade responsibility was to refine the intelligence, providing more detail concerning the projected deployment of the enemy. With the intelligence estimate in place, collection confirmed or denied the deployment of enemy formations in order to assess the accuracy of the provided and refined intelligence, and subsequently enable the commander to make decisions. The commander's decision brought Army formations to bear on the enemy, ensuring the division's forces could maneuver and mass firepower on the enemy.

July, 1982 FM 101-5 <i>Staff Organization and Operations</i> <i>FD</i>	August, 1982 FM 100-5 <i>Operations</i>	July, 1984 FM 101-5 <i>Staff Organization and Operations</i>	May, 1986 FM 100-5 <i>Operations</i>			June, 1993 FM 100-5 <i>Operations</i>
		1986 FM 34-2 <i>Collection Management (U)</i>	July, 1987 FM 34-1 <i>Intelligence Electronic Warfare Operations</i>	May 1989 FM 34-130 <i>Intelligence Preparation of the Battlefield</i>	October 1990 FM 34-2 <i>Collection Management?</i>	March 1994 FM 34-2 <i>Collection Management and Synchronization Planning</i>
	August, 1984 FM 34-1 <i>Intelligence Electronic Warfare Operations</i>					

Figure 3. Key Doctrinal Manuals in ISR Development 1982-2000

In the period of 1984 to 1986, three intelligence manuals replaced the aging *Combat Intelligence* (1973). The FM 34 series of doctrine emerged to fulfill the AirLand Battle requirements within the framework of the CEWI battalion. Two of these manuals, FM 34-1, *Intelligence Electronic Warfare Operations*, 1984; and FM 34-2, *Collection Management*, 1986 reflect important tenets of the staff organization and operations manual as applied to Military Intelligence. Also of importance is the publication of FM 34-10, *Division Intelligence and Electronic Warfare Operations*, 1986 that clarifies vague statements in the 1982 FD and 1984 publication of *Staff Organization and Operations* and is the only intelligence doctrine published in regard to the CEWI divisional MI battalion.

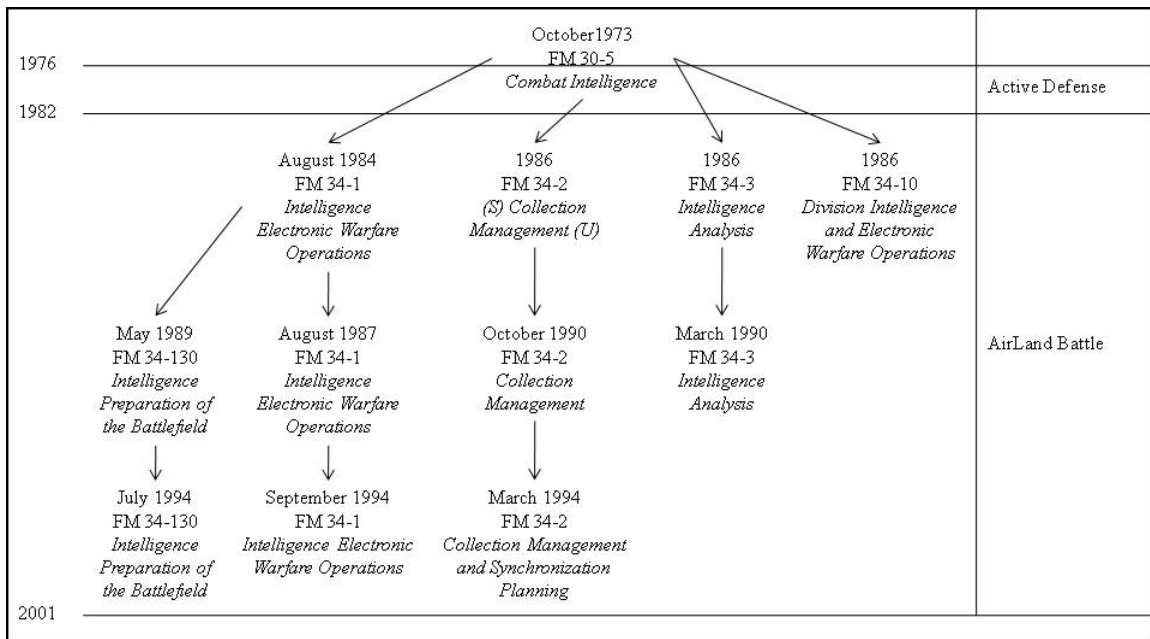


Figure 4. Key Military Intelligence Manuals in ISR Development

Recall that the formal IPB process gained approval in 1975. Between 1975 and 1989 IPB methodology was captured in a training circular and in 1984 it was discussed in FM 34-1. Erik Fedde stated, “The first step of AirLand Battle Planning is know your enemy: his doctrine, his order of battle, even his personality” (Fedde 1983, 12). To maximize time in AirLand Battle the method of locating forces in depth required familiarity of the threat, specifically the Soviet threat. Military intelligence contributed to locating forces in depth through IPB. In 1983, IPB involved five sequential steps consisting of: threat evaluation, determining the commander’s area of interest and area of influence, terrain analysis, weather analysis, and threat integration—all of which directly supported collection planning. Intelligence Preparation of the Battlefield “provides the information initially required to allocate and concentrate intelligence collection and combat resources at the critical time and place.” The results of the IPB process are the event and decision support templates. These two templates enabled the intelligence officer to deduce the most likely locations to observe enemy formations in order to determine their intent (Colonato 1983, 4-6).

Determining the most likely locations to focus intelligence and combat resources was only part of the engagement scheme. Determining how to engage the enemy in depth was the second part. AirLand Battle prescribed an engagement plan assigning responsibility in depth to Army echelons. A brigade commander was responsible to “influence events” up to 15 kilometers in front of his Forward Line of Troops (FLOT). A division commander was responsible for distances up to 70 kilometers and the corps commander up to 150 kilometers in front of the FLOT. As the echelon increased each

commander's areas of interest extended further in depth and laterally across the battlefield as well (Romjue 1984, 3).

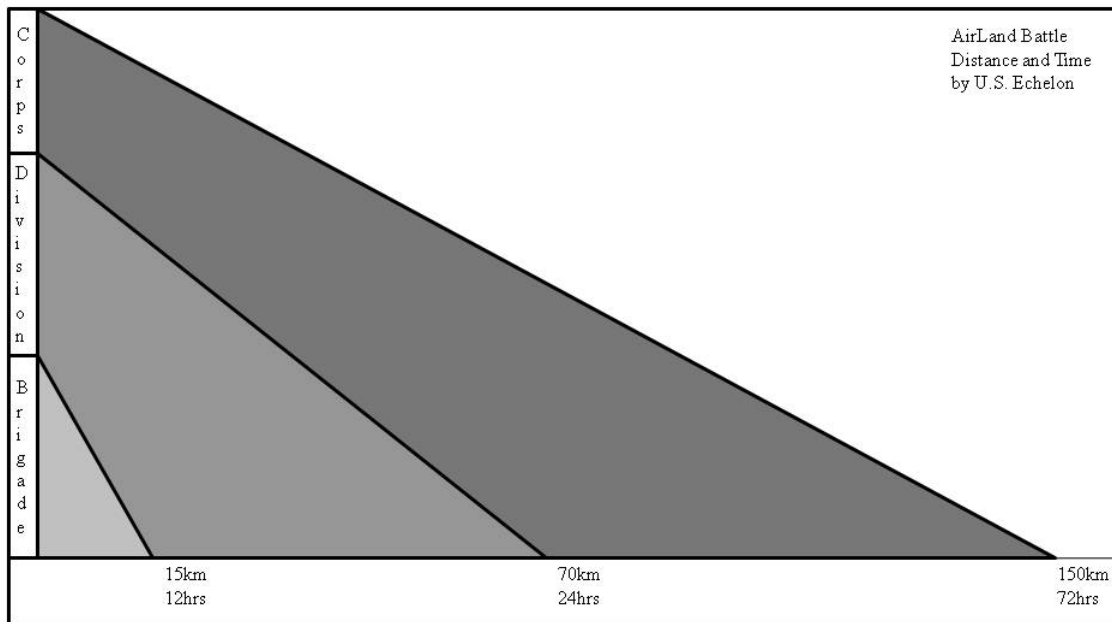


Figure 5. Comparison of Echelon Distance and Time

Source: Created by author and information obtained from John L. Romjue "Air University Review, May-June 1984." *Air & Space Power Journal*. May-June 1984

Determining enemy locations was not only a matter of depth, it was a matter of time, “for this time governs the point when commanders must take action—12 hours away for the brigade, 24 for the division, and 72 for the corps. To handle this new depth of the modern battlefield, U.S. land, and air forces had to wage a synchronized, fully integrated AirLand Battle” (Romjue 1984, 3). As such, IPB was an effective process in evaluating the current disposition of the enemy forces, and the enemy’s likely disposition as the battle unfolded. Collection Management became the doctrinal process for synchronizing intelligence and collection assets across the battlefield in order to acquire the enemy in a likely location rather than by chance. As collection management matured

the introduction of the Intelligence and Electronic Warfare (IEW) synchronization matrix facilitated more effective collection planning.

John Black discusses the introduction of the IEW synchronization matrix, a result of the First Gulf War. The IEW synchronization matrix began with the 3rd Army G2 Staff. “The IEW Synchronization Matrix focuses on precisely what intelligence war-fighting commanders need and when they need it. When properly developed and used, the matrix allows intelligence officers to optimize collection and dissemination, while focusing scarce collection assets to answer the commander’s need in a timely manner” (Black 1991, 32).

The IEW synchronization matrix, later the intelligence synchronization matrix, did not necessarily revolutionize collection synchronization but this tool and other lessons of Operation Desert Storm prompted a rewriting and publication of FM 34-1, 34-2 and 34-130 in 1994. These were the last major intelligence doctrine revisions influencing collection management during the AirLand Battle period. By 1995, Force XXI and a force drawdown would send intelligence techniques and procedures into a period of fluidity as the Army experimented with organizational changes and technological enablers. This fluidity hindered the development and publication of intelligence doctrine as both technological enablers and organizations rapidly changed through experimentation and the application of lessons learned.

Paul Menhoer Jr. described Force XXI as the Army’s vision of the 21st Century force as well as the process through which an Army transformation would occur (Menhoer 1996, 6).

MI Organization for the AirLand Battle

With slight derivations in its organization, and changes in equipment, the CEWI battalion served the Army through the AirLand Battle period of nearly two decades. The direction of collection, a basic tenet of direction by MI and responsiveness to MI, continued into the late 20th century. This responsiveness enabled the CEWI battalion commander to provide information to the G2 thereby enabling the G2 to answer the commanders information requirements. This arrangement freed the G2 from managing the actual collection assets. This freedom enabled the G2 to focus on what needed to be collected and the analysis, production and dissemination of intelligence without the distraction of how to collect. This arrangement empowered an educated and experienced MI battalion commander and staff to assign collection tasks to assets most capable of answering the collection requirements. This relationship between the G2 and the CEWI battalion commander remained relatively unchanged as the CEWI organizational structure changed.

Between 1987 and 1995 a series of organizational changes occurred concerning the employment of the CEWI battalion. The changes occurred within two categories; one directly germane to the collection planning and direction interaction between the G2 and the G3 as it illuminates the same relationship in the BCT staff; the second directly related to the development of the modern MICO.

According to *Division Intelligence and Electronic Warfare Operations* (1986) the Intelligence and Electronic Warfare Support Element (IEWSE) supported maneuver brigades through provision of MI personnel and advice. The CEWI battalion had three IEWSEs, one per maneuver brigade (*Division Intelligence and Electronic Warfare*

Operations 1986, 2-7). William Wenger noted that the IEWSE generally consisted of two personnel, focused on the dissemination of SIGINT information from the CEWI battalion to the supported brigade, acting independently or in concert with a supporting MI company team from the CEWI (Wenger 1994, 30).

In some ways, the MI, or IEW company team resembled the provisional MI company that supported the division prior to CEWI. Brock Harris describes the team as an “ad hoc grouping of divisional collection assets...” (Harris 1997, 40). Two MI company teams, provided by the CEWI battalion, supported the forward brigades of the division. These company teams consisted of task organized collection assets and personnel. As force projection emerged as a driving factor in designing Army organization, the IEW company team and support element became permanent organizations identified as Direct Support (DS) MI companies. These companies resemble current MICOs in certain collection capabilities, but the development of the Deployable Intelligence Support Element (DISE) and later the Analysis and Control Team (ACT) introduce the analytic capabilities found in the current MICO.

The DISE was an organization that supported split-based operations. By providing MI assets beyond those available in a DS MICO the MI battalion could support the early entry brigade of a deploying division. The inclusive assets, consisting of communications and MI fusion automation, were generally of limited quantity thus preventing a proliferation to each DS MICO. When the division main body and the MI battalion deployed, the DISE either returned to the MI battalion or was further task organized. The DISE, like the IEW company team, was a tailored, task organized

element. Brian Keller stated, “Once deployed, the DISE provides an important link to the DS MI company’s ACT at the brigade combat team command post (Keller 1996, 17).

The DISE entered into Army vernacular between the publication of *Division Intelligence and Electronic Warfare Operations* in 1986 and 1994. Sergeant Valmer Taylor wrote about the “relatively new” ACT concept in 1998. Taylor describes the limited ability of the DS MICO as resigned to passing collected information to the IEWSE. The IEWSE conducted limited analysis, focused on SIGINT, in support of the brigade S2. The ACT would provide all-source analysis ability, organic to the DS MICO, directly supporting the brigade S2 with analysis and collection asset direction (Taylor 1998, 20-24). “Under Force XXI, the direct support (DS) companies of the divisional MI battalion are charged with providing the maneuver brigade commander with near-real-time (NRT) intelligence, a capability that did not previously exist” (Harris 1997, 40).

Why is the discussion of the MICO important in a study focused on the BCT staff? The answer is concerned with the interaction between the MICO in support of the brigade and how it did, and does, relate to planning and direction of ISR by the staff.

In November 1997, the Army conducted a Division Advanced Warfighter Exercise (DAWE) with the Army’s Force XXI Experimental Force (EXFOR) the 4th Infantry Division. Commanded by MG William S. Wallace, the EXFOR experiments, and the November 1997 DAWE in particular, highlighted the necessity to bring intelligence and operations closer than ever before. The experiment demonstrated the success of bringing the ACE, the G2 cell and the MI battalion operations center together at the Tactical Command Post-1. A similar mergence occurred when the brigade S2 section and ACT collocated. In both instances, the result was a closer coordination

between the intelligence collection, processing, analysis, and dissemination of intelligence in support of the commander's information requirements (Wallace and Tait 1998, 7). These procedures in collocating elements streamlined the tasking, production exploitation, and dissemination of intelligence, effectively operationalizing intelligence in the current operation.

ISR and Full Spectrum Operations (2001-Current)

Full Spectrum Operations Doctrine

Full Spectrum Operations replaced AirLand Battle and continued on with the force-projection concept with the advent of FM 3-0, *Operations*, 2001. During the same developmental timeframe leading to the publication of *Operations* (2001), a discussion concerning ISR was taking place. In large part, ISR grew out of the Training and Doctrine Command (TRADOC) Remedial Action Program (T-RAP). Leeder, 2008) Intelligence, surveillance, and reconnaissance replaced Collection Management as well as Reconnaissance, Surveillance, and Target Acquisition (RSTA) doctrine in the same manner and timeframe that the Full Spectrum Operations concept was replacing AirLand Battle. The decision to develop ISR was a coordinated effort between the Combined Arms Doctrine Directorate (CADD), the United States Army Intelligence Center and Fort Huachuca (USAIC&FH), and other TRADOC proponents as a method to reverse negative collection trends observed at the combat Training Centers (Intelligence Surveillance & Reconnaissance (ISR) Focused Rotation and Action Plan Update 26-27 March 2002). This change was necessary to maximize the utilization of limited ISR assets and place new emphasis on the combined arms planning aspect of the intelligence staff function of ISR.

The doctrinal introduction of ISR occurred within a discussion of information superiority. Effective ISR is a contributor to information superiority. “ISR integration is fundamental to information superiority. Thoroughly integrated ISR operations add many collection sources. ISR integration eliminates unit and functional “stovepipes” for planning, reporting, and processing information and producing intelligence. It provides a common mechanism for all units to conduct ISR operations in a coordinated, synergistic way” (*Operations* 2001, 11-7).

The commander’s information requirements remain the impelling factor in intelligence operations, “The commander drives the intelligence system.” In *Operations* (2001), the ISR discussion heavily indicates the intelligence system as the orchestrating effort in planning ISR. Intelligence personnel conduct the three tasks associated with managing the ISR effort, requirements visibility, asset visibility, and ISR assessment capability. ISR assessment capability is described as, “Intelligence personnel use procedures and information systems to assess the effectiveness of the ISR effort and the operational impact of ISR results (such as its success or gaps in collection), and to task collection assets (*Operations* 2001, 11-8).

Intelligence provides critical support to all operations, including IO. It supports planning, decision making, target development, targeting, and protecting the force. It is a continuous process for any operation. Surveillance and reconnaissance are the primary means of collecting information used to produce intelligence. A thorough understanding of joint ISR capabilities allows commanders to prepare complementary collection plans.... (*Operations* 2001, 11-8).

Operations 2001 identified the direct relationship between IPB and ISR. “IPB is the first step toward placing an operation in context. It drives the process that commanders and staff use to focus information assets and to integrate surveillance and

reconnaissance operations across the AO” (*Operations* 2001, 11-9). Intelligence appeared to be the primary battlefield operating system responsible for both IPB and ISR.

However, the eventual implementation of ISR was not as envisioned during the pre-*Operations* (2001) discussions, nor as articulated in the three tasks entailing the management of ISR. More accurately, issues with ISR doctrine began to emerge after the publication of *Operations* (2001). These issues manifested during the development of FM 6-0, *Mission Command: Command and Control of Army Forces*, 2003.

Prior to 2001, Collection Management was the premier methodology for planning collection missions utilizing reconnaissance and surveillance assets. It was also the primary doctrine discussing the necessity to track information requirements from their inception until their satisfaction, including the condition and disposition of assets assigned to collect the needed information to produce intelligence. Although FM 34-2, *Collection Management and Synchronization Planning*, 1994 was predominately a MI manual, its utility in synchronizing reconnaissance and surveillance across all battlefield operating systems was recognized and perpetuated.

In 2001, Collection Management as a doctrinal term ceased to exist. This is not to say that collection management did not continue within the Army’s traditional lexicon. Collection Management terms and procedures as prescribed in *Collection Management and Synchronization Planning* (1994) also persisted. This is a testament to the failure to educate the force through training derived from changes in doctrine (Goodman 2004-2007). Similarly, ISR replaced the doctrinal term and tasks associated with RSTA (Nicholas 2007).

The change from collection management along with the elimination of the doctrinal task of RSTA did not spread through the force for multiple reasons. The first reason was that no detailed field manual replaced *Collection Management and Synchronization Planning* (1994). USAIC&FH wrote two drafts of FM 2-01, *Intelligence Synchronization* but neither draft was staffed to the Army. The result, *Operations* (2001) introduced the term and definition of ISR, as well as tenets and key terms, but it was not the appropriate venue to describe the process in detail.

The CADD never produced FM 3-55, *ISR* (or *Intelligence, Surveillance, and Reconnaissance Operations*) ostensibly, because the Joint Forces Command never produced an updated Joint Publication 3-55. In fact, the existing Joint Publication 3-55, *Reconnaissance, Surveillance, and Target Acquisition*, “was cancelled by the Joint Staff J7 in December 2003” (Bryant 2007). A new Joint Publication was never developed.

In the context of this study, a more germane reason the production of an Army ISR field manual did not occur was the USAIC&FH concept for ISR differed from that of the United States Army Infantry Center. More audibly, the United States Army Armor Center’s concept for ISR differed from that of USAIC&FH. This is not to say that other proponents did not harbor additional varying perspectives, but the United States Army Armor Center’s response to the proposed evolution of ISR resulted in the greatest impact for ISR doctrine development at USAIC&FH as well as CADD. The central theme of this disagreement resided in the authority to direct ISR assets or “tasking authority” (Goodman 2004-2007).

During the development of the *Operations* (2001), USAIC&FH proceeded to develop the ISR doctrinal framework under the auspice of the intelligence officer as the primary staff officer responsible for planning and direction of ISR.

The development of *Mission Command* (2003) exposed a developing discrepancy between the United States Army Armor Center and USAIC&FH in the perception of the ISR model, specifically ISR integration and the ISR integrator. The publication of *Mission Command*, 2003 resulted in a division of ISR functions between the S2 and the S3. The S2 would perform intelligence synchronization. The S3 would perform ISR integration. This was a substantial change from FM 101-5, *Staff Organization and Operations* (1997 and 1994), and FM 101-5, *Staff Officers Field Manual Staff Organization and Procedure* (1972). It was also a considerable change considering the progress made through Intelligence XXI efforts.

The *Staff Organization and Operations* (1997) manual clearly identified the S3 as the principal staff officer concerning operations and plans; however, it included an interesting qualifier. A bulleted paragraph within the discussion detailing operations and plans responsibilities of the S3 states, “Coordinating with the G2 [S2] to write the reconnaissance and surveillance annex, which includes tasking units with available assets, to collect the commander’s priority intelligence requirements.” In the description of the intelligence officer responsibilities the S2 was responsible for, “Planning and managing intelligence collection operations in coordination with the G3 [S3] and fire support planners” as well as assisting the G3 [S3] in planning target acquisition activities for collection of target information. Nothing in *Staff Organization and Operations*, 1997 subordinated the S2 activities to the S3. On the contrary, the document appears to require

the S2 and the S3 to coordinate in “units with available assets” (*Staff Organization and Operations* 1997, 4-10—4-12).

With the transition to ISR from collection management, USAIC&FH only retained proponent status for the Army task intelligence synchronization. The intelligence officer retained responsibility for the tasks concerning requirements management and some of the mission management tasks as described in *Collection Management and Synchronization Planning* (1994). Thus, the S2 was responsible for the task of intelligence synchronization. The Combined Arms Command (CAC) at Fort Leavenworth became the proponent for ISR and the responsibility for the task of ISR integration. CAC retained ISR integration proponent status because multiple maneuver branch schools had an interest in developing combined arms staff operations officers S3; accordingly, the S3 became responsible for ISR integration which encompassed the remaining mission management tasks from *Collection Management and Synchronization Planning* (1994)—and on behalf of the commander, the asset management tasks as well.

Full Spectrum Operations BCT MI Intelligence Organization

The Army MI organization within the BCT incorporated many of the recommendations discovered through Force XXI and Interim BCT experimentation. The Interim BCT became the SBCT while light mechanized and armored forces transitioned to the IBCT in the former instance and the HBCT in the latter two. The ACT became the ISR analysis platoon and the ISR integration platoon of the MICO within the SBCT. “The MI company conducts intelligence analysis and ISR integration...” The two platoons of the MICO that conduct analysis and integration are under the operational

control (OPCON) of the SBCT S2. Through the brigade S3, the S2 directs the MICO (*The Stryker Brigade Combat Team* 2003, 10-18).

The same relationship with slightly different organizational structures support the remaining two BCTs. The ISR Integration Platoon of the MICO is still OPCON to the IBCT and the HBCT S2. Elements within the platoon perform the analysis, processing, and integration functions.

From an organizational perspective, direct support assets provided by the divisional MI company became organic assets within the BCTs. The gain for the BCT was direct control of assets and personnel responsible for supporting the brigade commander and satisfying his information requirements. The loss was an experienced intelligence command and control mechanism ensuring the most efficient employment of ISR assets in support of not only the BCT, but the division as well. This organizational change led to the first clean break in the MI-to-MI planning and direction chain in the 34 years since CEWI development.

Looking to the Future: ISR and Full Spectrum Operations (2007 and Beyond)

The conduct of ISR is constantly becoming more complex and advanced. The TRADOC Pamphlet 525-2-1 states, "... the continuous acquisition and analysis of data and information from Army, joint, interagency, multi-national, and non-traditional sources allows for an accurate understanding of complex operational environments." The BCT will be the key echelon for both collection and consumption of data, information, and intelligence (*The United States Army Functional Concept for See* 2007, i).

Army BCTs of the future will rely on national and joint interdependent and interoperable ISR as well as their organic and subordinate assets. In spite of technology

enablers already in place in the current force, and a published goal for the future force, there is no clear plan to evolve ISR in the modular BCT as it adjusts to operating side by side with the Future Brigade Combat Team (FBCT). In other words, there are end states, but no plan to move the force to that end state.

There will be four types of BCT in the Army of the future: IBCT, HBCT, SBCT, and the FBCT. The IBCT, HBCT, and SBCT exist today. The IBCT and HBCT each have an approved Objective Table of Organization and Equipment (OTOE). The MTOE for each IBCT and the HBCT reflect the availability of personnel and equipment in the Army at present strength while the OTOE reflects the ultimate, or ideal, disposition of each BCT. On the other hand, the SBCT MTOE is practically the same as its OTOE. The IBCT, HBCT, and SBCT operating in today's Army will benefit from technology enablers funded through the Future Combat System (FCS) program. A recent Association of the United States Army (AUSA) document stated, "FCS technologies will migrate into the current force through a series of four spinoffs." The Army intends to move proven technologies into BCT units as soon as possible quickening the fielding of FCS technologies originally scheduled for 2010 (AUSA 2005a, 2-3).

Advances in communication technology through the restructured Joint Network Node-Network (JNN-N) and the Warfighter Information Network-Tactical (WIN-T) will provide on-the move ISR connectivity to the BCT of the future (Rosenberg 2007, 26). The amount of information a BCT currently has available in a fixed location with improved communications will eventually be available to the BCT on the move.

Connectivity on the move will result in more data and information available to the BCT than current systems provide. The information will include data and information, as

well as intelligence products. Intelligence, surveillance, and reconnaissance assets report data and information, ultimately to the ISR staff. Adjacent units pass, and division or higher units and activities push intelligence products to the BCT ISR staff. Managing the data and information will become more complex simply because of the increased amount of information and intelligence available to the BCT ISR staff. The ISR staff must be organized and trained in a manner that facilitates efficient identification and utilization of relevant information in the production or refinement of intelligence.

Regardless of the technology promised on the horizon, the BCT of the future must not lose the ability to collect information and produce intelligence at the BCT echelon. The BCT must be able to do this independent of lateral and horizontal communications. Unplugging from the network, by choice or force, cannot be synonymous with blinding or stupefying U.S. BCTs. Over reliance on future technology at the expense of redundant systems is risky. In a recent article, Daniel L. Davis points out:

Since the early 1990s, senior military leaders have been preaching what amounts to a faith-based belief in the efficacy of future technology. We are always told that “soon” we will see “unprecedented” capabilities as a result of technology, and that our troops, so equipped, will enjoy “overmatch” against any opponent. However, when it comes to combat operations in which theory has met reality, a different story has emerged (Davis 2008, 17).

In order to continue to produce intelligence to satisfy the commander’s requirements the BCT needs an ISR staff that is organized and authorized to plan and direct collection in a constantly changing environment. The ISR staff requires an organization that can effectively analyze information, then produce and disseminate intelligence—all in an environment devoid of reliable connectivity between technological enablers.

Problems and Questions

The current course to improve ISR in the BCT as it adjusts to operating side by side with the FBCT may not be adequate; it may not be as efficient as it could be. Intelligence, surveillance, and reconnaissance must be a synchronized operation that facilitates the commander's decision-making. It does this by providing information to the Intelligence process, which in turn supports targeting, staff planning and staff assessment. It must also support targeting. The BCT commander of the future requires ISR to be a fully integrated staff activity. The Army must transition its doctrine and organization concerning the conduct of ISR. It must do so starting with doctrine that was not fully developed. Exacerbating the problem further, this transition will occur while the Army force is at war. Current issues with ISR planning and direction must be explored in order to solve this problem. Then addressing the potential problems facing the BCT and FBCT can occur. There are current BCT ISR Doctrinal and Organizational Shortfalls.

There is a perception that current ISR staff activities are not meeting the commander's needs. Two reasons cited for the ineffectiveness of ISR in the BCT are doctrine and organization. Does the Army model for ISR meet the needs of the BCT commander in the future? More specifically, does the Army BCT doctrine meet the needs of the BCT commander in the future? Is the doctrine concerning ISR clear enough? Is it authoritative? Should doctrine have evolved in the manner that it did? Why did the authority for planning and direction of ISR change between 2001 and 2003? Which staff principal should be responsible for planning and direction of ISR? Are staff principals the proper means of discussing staff authority in light of the Functional Cell construct? What

should the interaction between the Intelligence Functional Cell and the Movement and Maneuver Functional cell be in respect to ISR? How does the Fires Cell factor in?

Likewise, does the Army BCT organization meet the needs of the modular BCT commander in the future? What is the ISR staff? What staff or functional cell components make up the ISR staff? Is the intelligence staff the ISR staff?

Assumptions

Accepting several assumptions is necessary prior to the conduct and understanding of this study. The limited amount of academic and Army professional discussion concerning the conduct of ISR at the BCT echelon necessitates a number of these assumptions. Conversely, there are a number of ISR problem discussions concerning echelons other than BCT. There is an inference from those discussions that similar ISR problems may manifest in the BCT. With the above in mind, this study assumes that the BCT will organize its staff as functional cells in line with the warfighting functions (WFF). The first FBCT will operate adjacent to a BCT under the command and control of a modular division within seven years. However, the personnel and money for improving Army BCT ISR will continue to some degree even if there is a reduction of resources for the development of the FBCT. A further assumption is that the ISR problems present in the legacy division will persist into the modular brigade.

Assumption 1. The Army adjusts to the functional-cell concept for the conduct of all operations. The current staff structure provides personnel to the functional cells to conduct current and future operations as well as plans. This occurs in a manner devoid of parochial attachment to the legacy staff structure. This is a key assumption in the development of this thesis.

Assumption 2. In seven years, the first FBCT will be operational and will conceivably operate adjacent to a BCT under the command and control of a modular division (AUSA 2005a, 1). The BCT and FBCT must plan and conduct ISR in a manner that promotes cooperation between both elements as well as supporting the division. Modular BCT and FBCT doctrine and training development must occur in a manner that will ensure interoperability under a modular division headquarters.

Assumption 3. Personnel and money will continue to be available to improve Army BCT ISR. The development of the FBCT does not predicate the development of BCT ISR; however, capabilities developed for FBCT provide improvements for the BCT. If FBCT development is curtailed the requirement to improve BCT ISR remains (Matthews 2008, 8).

Assumption 4. Some ISR problems unresolved in Force XXI will persist in the modular brigade. This assumption implies that there will still be shortfalls in the planning and direction of ISR at the BCT echelon. The Army has placed significant capabilities within the BCT. At the same time, the Army has eliminated command and staff to manage capabilities; the result, division ISR asset capabilities formerly resident at the division echelon are now available at the BCT echelon but without the command and staff experience to manage the capabilities.

Analysis of Assumptions. The conduct of ISR requires improvement at the BCT echelon. The evidence supporting this assertion derives from USAIC&FH Observation, Insights, and Lessons Learned (OIL) interviews as well as documents from Joint Readiness Training Center (JRTC). Academic writings, journal articles, and government documents provide additional evidence. In many instances, the assertions in these

documents pertain to ISR at echelons higher than brigade. Some of the assertion involves the movement of information from national and Department of Defense (DOD) intelligence agencies down to the BCT intelligence staff. Simply emplacing communications capabilities and technological enablers in BCT will not meet the commander's needs. The commander must dedicate an ISR staff to take advantage of this information for ultimate use.

Definition of Terms

There are several variations concerning terms and definitions between the doctrinal, conceptual, and academic writings contributing to this research. Additionally, superseded definitions of terms cited within their source document enable the reader to appreciate the changes within definitions. Research of this thesis compared key definitions and attempted to reconcile the discrepancies by selecting definitions that are most accurate in the context of this research.

It is often preferable to modify the definition of an existing doctrinal term rather than introduce a new term and definition. Conversely, it may sometimes be preferable to delete an old term when it is no longer suitable. On occasion, modifying a term as well as its definition may produce the best result. With the above guidelines in mind, the following sources provide the most current definitive definitions to terms used throughout this document: FM 3-0 *Operations*, 2008; The Joint Electronic Library (JEL); FM 1-02 *Operational Terms and Symbols*, 2004; TRADOC 2005, 2006 and 2007 Concept Papers.

As described earlier, collection management was the Army's leading methodology for coordinating collection activities in support of intelligence production and decision-making.

Collection Management. (DOD) In intelligence usage, the process of converting intelligence requirements into collection requirements, establishing priorities, tasking or coordinating with appropriate collection sources or agencies, monitoring results, and retasking, as required (Joint Electronic Library, <http://www.dtic.mil/doctrine/jel/doddict/index.html>).

Operations (2001) introduces ISR as a replacement methodology. *Operations* (2008) provides clarified definitions concerning ISR. These definitions apply in ISR discussions through the remainder of this document.

Intelligence, surveillance, and reconnaissance (ISR) Intelligence, surveillance, and reconnaissance is an activity that synchronizes and integrates the planning and operation of sensors, assets, and processing, exploitation, and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function. For Army forces, this activity is a combined arms operation that focuses on priority intelligence requirements while answering the commander's critical information requirements (*Operations* 2008, 7-8).

Intelligence, surveillance, and reconnaissance synchronization is the task that accomplishes the following: analyzes information requirements and intelligence gaps; evaluates available assets internal and external to the organization; determines gaps in the use of those assets; recommends intelligence, surveillance, and reconnaissance assets controlled by the organization to collect on the commander's critical information requirements; and submits requests for information for adjacent and higher collection support (*Operations* 2008, 7-8).

Intelligence, surveillance, and reconnaissance integration is the task of assigning and controlling a unit's intelligence, surveillance, and reconnaissance assets (in terms of space, time, and purpose) to collect and report information as a concerted and integrated portion of operation plans and orders (*Operations* 2008, 7-9).

Planning and direction is the first intelligence operation discussed in the joint intelligence process. Although some of the specific tasks associated with planning and direction in Joint Publication 2-01, *Joint and National Intelligence Support to Military*

Operations, 2004, are more appropriate to a Joint Task Force, the tenets of the definition are appropriate for this discussion. Air Force Doctrine Document 2-9, *Intelligence, Surveillance, and Reconnaissance Operations*, 2007; and Marine Corps Warfighting Publication 2-1, *Intelligence Operations*, 2003, both use to this definition as well. The term planning and direction is appropriate because past Army doctrinal discussions of collection used the terms planning and directing often. A review of the ISR definitions listed above demonstrates a lack of planning and direction language, previously essential in Army collection discussions.

Planning and direction. In intelligence usage, the determination of intelligence requirements, development of appropriate intelligence architecture, preparation of a collection plan, and issuance of orders and requests to information collection agencies (Joint Electronic Library, <http://www.dtic.mil/doctrine/jel/doddict/index.html>).

As this paper continues, the joint definition of planning and direction is appropriate in illustrating the responsibilities of collection management to include planning, or ISR synchronization; and directing, or ISR integration and tasking.

This paper also discusses persistent surveillance. The term, as defined in TRADOC's *The United States Army Functional Concept for See* is the preferred definition for this paper.

Persistent surveillance. Continuous or near-continuous monitoring or tracking of targets and areas of interest. It may be accomplished by one type of system or means, or by multiple systems and means. [Derived definition from Battlespace Awareness FC] A collection strategy that emphasizes the ability of some collection systems to linger on demand in an area to detect, locate, characterize, identify, track, target, and possibly provide battle damage assessment and re-targeting in near or real-time. Persistent surveillance facilitates the formulation and execution of preemptive activities to deter or forestall anticipated adversary courses of action (*The United States Army Functional Concept for See* 2007, 84).

Limitations

The task organizations for the modular force remain in a state of constant adjustment. Although the OTOE for the BCTs has achieved a certain amount of solidity, there remain several small adjustments. Because the OTOE authorizations cited in the *Army Intelligence Comprehensive Guide to Modularity Version 3.0* as well as specific information in current MTOE available on Force Management System (FMS) Web are For Official Use Only (FOUO) or otherwise restricted, there is no discussion of precise personnel authorizations. There is however, a discussion of specific leader requirements as they pertain to organization of ISR staff elements.

There is a large amount of discussion concerning operational and strategic ISR, persistent ISR and persistent surveillance. Contrarily, there is a limited body of discussion concerning ISR at the BCT echelon. There is no discussion outlining the necessary evolution from what David Pendall described as the “old logic” of reconnaissance to the “new logic” of persistent surveillance within the BCT (Pendall 2005, 8-10). Likewise, there is no discussion outlining the transition from the old paradigm of collection management and intelligence synchronization planning to the new paradigm of ISR. There is discussion concerning the functional cell in relation to the current, future, and plans cells, but a limited discussion concerning the division of staff elements into the functional cells.

Scope and Delimitations

This study will concentrate on solutions pertaining to the BCT Staff, focusing on the doctrine and organization required for the conduct of ISR. Although the focus of this study is the BCT, this study must consider interdependence and interoperability with joint

and national ISR, and the interdependence and interoperability of Army ISR supporting the BCT.

Joint and national ISR interdependence and interoperability is necessary because joint and national agencies will collect information and push both information and intelligence directly to the BCT. Joint and national agencies may provide ISR assets directly to or conduct intelligence hand off with the BCT facilitating persistent surveillance. At the very least, the BCT will be able to pull intelligence from repositories associated with these various agencies. In respect to interdependence and interoperability on joint and national ISR, this study will not recommend solutions for ISR operations above the BCT echelon. For discussions and recommendations concerning joint and national ISR, see Pendall's and Todd C. Hogan's independent studies (Pendall 2005; Hogan 2007).

This study must also consider the interdependence and interoperability of the BCT and the modular division and corps. The modular division, with its Analysis Control Element (ACE), has the capability to produce and disseminate significant amounts of intelligence to the BCT intelligence staff. When augmented with a Battlefield Surveillance Brigade (BfSB) the modular division has the capability for providing data and information directly from BfSB ISR assets to the BCT intelligence staff. This study will not recommend solutions for ISR operations above the BCT echelon.

This study will not suggest solutions applicable to the Combined Arms Battalion (CAB) doctrine, training, and organization for the conduct of ISR. However, due to the interdependence and interoperability between CAB and BCT ISR, recommendations to the BCT ISR doctrine and organization may be directly applicable to the CAB.

In view of the above listed delimitations, this study will treat disseminated intelligence and reported data and information holistically, regardless of source. The necessity to recognize the increase of data, information, and intelligence available to the BCT should not be confused with the specific source of the data, information, and intelligence. The focus is identifying the training and organization necessary to manage the data, information, and intelligence at the BCT and prescribing the appropriate doctrinal changes to do so.

This study does not address aspects of electronic warfare planning and direction except as necessary in the discussion of organizations and as specific points of contrast in discussing staff responsibilities.

This study will focus on doctrine and organization. Although other elements of training, material, leadership, personnel or facilities may be mentioned or emerge as relevant, they are specifically delimited to the greatest extent possible.

Finally, this discussion will not cite restricted, FOUO, or classified information. These sources may provide the reader with additional facts or insights, which contribute to the clarity of this study; but the precise details contained therein, are not necessary to the development of the study.

Significance of the Study

This study will offer solutions to enable the planning and execution of ISR. The Army will conduct distributed operations with BCTs and FBCTs or under the command and control of modular division headquarters. In order to do so the ISR staffs of each organization must possess the doctrine, training, and organization to operate together. If current ISR doctrine and organization are is not adequate for full spectrum operations

then this study will identify why. Identifying and solving current doctrine and organization problems will enhance success in the BCT. Subsequently the BCT ISR planning and execution must gradually transition to a point where the doctrine and organization will be complimentary to the FBCT, thus increasing the potential for success between both organizations operating under the command and control of a modular division headquarters.

ISR Doctrinal Inadequacy

Current ISR doctrine is not adequate for full spectrum operations. Identifying and solving current problems within doctrine will enhance success in Modular and Future BCTs. Current doctrine does not clearly delineate staff responsibility in the conduct of ISR. This causes a perception that staff organization is deficient for the conduct of ISR.

ISR Organizational Inadequacy

The current ISR organization is not adequate for full spectrum operations. The BCT requires an ISR staff that can provide continuous current operations oversight 24-hours a day, 7-days a week. Because ISR is dynamic in nature, it requires continuous future operations planning to reconcile collection discrepancies arising from the current operations adjustments to ongoing ISR. Finally, the ISR staff must be large enough to handle vast amounts of data, information, and intelligence.

If, during the reading of this study, two specific thoughts emerge together in the readers mind, then this study is significant. The first thought, “The way ISR currently conducted is not adequate to meet the BCT commander’s needs in the future.” The

second thought, “Should the operations officer or the intelligence officer, based on the commander’s requirements and mission, direct the conduct of ISR?”

Chapter 1 Summary

Improvements in Army intelligence doctrine and organization have consistently improved the planning and direction of information collection. Coinciding with the transition to modularity was the doctrinal adaptation of ISR as the Army collection methodology replacing Collection Management and Synchronization Planning. This doctrinal step intended to make collection more comprehensive as well as responsive to the commander may not be the best organizational or doctrinal solution. Without unduly focusing on training this study explores whether the Army model for ISR meets the needs of the BCT commander of the future.

This study contains four chapters in addition the introduction. The literature review describes four general categories facilitating the research and analysis of this study. The third chapter describes the research methodology and explains the manner in which the research concerning the problem of BCT ISR originated and concluded. The analysis chapter examines the primary and secondary problems and compares potential solutions. The final chapter will propose a road-ahead to ensure that BCT ISR operations meet the needs of the future BCT commander.

CHAPTER 2

LITERATURE REVIEW

Chapter 1 of this study references Army doctrine and professional articles to articulate the evolution of ISR from 1976 to the present. Current doctrine, professional articles, and interview notes demonstrated the present state of Army ISR in the BCT as well as highlighting some existing problems in BCT ISR. Chapter 1 draws information from TRADOC Concepts as well as prior professional and academic studies to illustrate the requirements and capabilities expected of BCT ISR as it evolves into a form compatible with the FBCT. By evaluating the evolution of ISR doctrine and organizations, then assessing the current state of ISR and its shortfalls, an evaluation of ISR in future concepts can occur. This evaluation helps identify the needs of BCT commanders of the future modular force enabling the drawing of conclusions as to the best methods to evolve current ISR to the conceptual endstate.

This chapter discusses the categories of literature utilized in the research of this study, and then exhibits patterns of organizational and doctrinal development relative to the evolution of ISR emerge through the study of their interrelationship. Finally, this chapter predicts the needs of the BCT commanders of the future modular force concerning ISR capability and then illustrate obstacles in the future requirements of ISR.

Categories of Literature

Doctrine

This study utilizes the content of Army, Joint, and Air Force doctrine. The Brigade Combat Team is the primary echelon discussed throughout this manual;

therefore, Army doctrine is the primary doctrinal baseline utilized throughout this paper. Because BCT operations are dependent on Joint enablers, this paper refers to appropriate Joint doctrine and specific Air Force Doctrine for clarity and continuity. In instances where Army and Joint terms vary in text but not substance, no extrapolation will occur. In instances where Army and Joint definitions disagree substantially this document will identify and use a single definition with a short justification as necessary. This document will identify specific terminology discrepancies between current doctrine and concept publications.

Prior Professional Studies

A limited number of thesis, monographs, Lessons Learned documents, and Army doctrinal proponent white papers facilitate this study. These studies address similar or related problem statements concerning the conduct of ISR. The evaluation of these studies identifies prior issues related to the conduct of ISR. Evaluating the ISR concerns of the current modular force in the context of previous concerns allows several conclusions to be drawn. Evaluation can identify persistent issues that continue into the modular force, and identify issues arising since the advent of the modular force. Analysis can predict issues likely to persist or arise in the Experimental Brigade Combat Team, the precursor to the FBCT.

Felts' 1998 monograph facilitates this study in demonstrating the inadequacy of divisional MI organizations. Some of the inadequacies described by Felts, discussed in Chapter 4 of this study, still exist today. Although Felts suggested a modification to the organization of MI, his recommendations are now inconsistent with the course that BCTs

have taken within the Army. However, the problems, facts, and analysis of Felts' monograph greatly complement this study.

Both Pendall and Hogan analyze Persistent Surveillance, or Persistent ISR. Pendall, in a 2005 monograph, and Hogan in a 2007 thesis, demonstrate the need for a persistent surveillance capability in the DOD and Joint force. Pendall's definition of persistent surveillance compliments *The United States Army Functional Concept for See* as defined in Chapter 1.

Persistence means that once global, theater, or local reconnaissance has found something of intelligence or actionable interest, ISR systems- including processing and dissemination systems- will maintain a constant, enduring contact with the target, thus increasing the level of understanding about the target, enabling a faster decision cycle at all levels of command, and support the application of precision force to achieve desired effects (Pendall 2005, 1).

Both Pendall and TRADOC discuss persistent surveillance as a leveraging of systems that maintain observation of an entity once acquired. Likewise, both documents recognize the limitation of persistent surveillance, a capability required by BCTs and achieved on a limited basis given existing systems. "While persistent surveillance is only achievable for specific periods of time against extremely critical targets, it is an essential capability for the future Modular Force" (*The United States Army Functional Concept for See* 2007, 30). Aspects of their studies are directly applicable to the needs of the BCT commander in the future.

In his 2000 monograph, Thomas Kardos detailed the goals and shortfalls of Intelligence XXI, the intelligence community's complimentary initiatives to Force XXI. This study provides insight to the direction ISR was heading prior to the current operations in Afghanistan and Iraq.

A contrasting perspective is presented in David Jewell's 2003 monograph, *Transforming the Core Function of Military Intelligence to Knowledge Management*. Jewell's monograph advocates a change to the entire MI charter and may be most appropriate to division because the absence of organic ISR assets requires division to rely on information collected by subordinate, adjacent, and higher units. This makes the division intelligence apparatus, especially the ACE, a predominantly analytical element with much less a focus in collection. Jewell's argument is not feasible with the BCT ISR requirements. Although Jewell is correct in stating, "These process steps and disciplines fall into two general and knowledge functions: one that gathers data and another that creates knowledge and delivers it to inform the understanding of decision-makers." He fails to appropriately characterize surveillance and reconnaissance as the dedicated means for finding and reporting specifically sought information.

The conduct of surveillance and reconnaissance fulfills two purposes, an apparent purpose, and an ultimate purpose. The observation and reporting of information is the apparent purpose. Often the collected information is useless as it stands alone. But when this information is held in context of the running intelligence estimate this information may be quite actionable. The ultimate purpose of surveillance and reconnaissance may be lost in counterinsurgency operations or in other instances of stability operations. The ultimate purpose of surveillance and reconnaissance is to collect specifically targeted information to enable the production of intelligence. Jewell's monograph is correct in the assertion that multiple non-intelligence platforms will have the ability to collect and report information (Jewell 2003, 11-12). However, this matter of course collection is not reconnaissance or surveillance.

Army Concept Publications

The Army's concept for tactical ISR is not clear. There are several TRADOC pamphlets concerning the future force—specifically the TRADOC Functional Concepts. The TRADOC Functional Concepts outline the future doctrine, training, and organization for the U.S. Army. It is imperative that the Army progresses towards the TRADOC concepts in order to conduct parallel development among the various contributors to ISR improvement. Simultaneously those same concepts require modification to remain valid in light of the ever-changing operational environment.

These documents are relatively consistent in their concept, organization, and doctrinal terminology concerning intelligence, surveillance, and reconnaissance; however, they do not present a clear road map to get from where ISR is to where it needs to be. Therefore, reconciliation between the variances in the concepts is necessary and a road-ahead must be proposed and accepted in order to take ISR from its current practice to a realization of the proposed concepts.

Still, the TRADOC concepts state a goal toward which the Army needs to move. This study benefits from two premises contained in the TRADOC concepts. The first premise is the centrality of the commander. Staff and subordinate elements conduct their actions within the commander's intent. Staff actions facilitate the commander's decision-making (*Battle Command* 2007, 16-19). A second premise is that of persistent surveillance, already discussed in Chapter 1 and previously in this chapter.

Professional Publications

The evolution of collection operations to ISR is apparent through a few key journals. *Military Intelligence*, later titled *Military Intelligence Professional Bulletin*,

Armor, and *Infantry* magazines are time capsules, preserving the discussions of ISR through the individual articles therein. These documents provide a timeline, which facilitate comparisons of professional thought to the progression of doctrinal and organizational adaptations concerning collection operations and ISR. Unfortunately, there are limited scholarly and professional journal discussions concerning the conduct of ISR at the BCT echelon. Discussion concerning command and control; ISR systems; and the conduct of ISR at the joint and national levels support abound. These discussions, through inference, aid the identification of issues and potential solutions that will occur in the BCT.

In *Military Intelligence*, and *Military Intelligence Professional Bulletin* three conversations predominate the ISR discussion. The first is IPB, the second concerns the Reconnaissance and Surveillance plan, the third is organization.

In *Infantry* and *Armor*, the discussions germane to ISR do not generally concern relationships between interested staff. Doctrinally, the majority of articles concern the conduct of tactical reconnaissance. Organizationally, the magazines discussions generally concern Brigade Reconnaissance Troop development, High Mobility Multipurpose Wheeled Vehicle and Cavalry Fighting Vehicle comparisons, and more recently Cavalry Reconnaissance Troop and Reconnaissance Squadron discussions relevant to modularity. With few exceptions, *Infantry* and *Armor* magazines do not discuss the command and staff relationships connected to ISR, and when they are, it is almost exclusively from an IPB or Operations Order (OPORD) perspective. The exceptions are the appearance of articles authored by MI officers.

White Papers

This study utilizes two sets of unpublished White Papers as supporting evidence as to the introduction of ISR terminology post-1999 as well as the attempt to clarify ISR terms and definitions for *Operations* (2008). The former illustrates an attempt to reconcile tensions in tasking authority begot through the elimination of the doctrinal collection management and intelligence synchronization process as ISR becomes the doctrinal methodology for planning and directing all possible collection assets. The later White Papers illustrate the attempt to clarify roles and responsibilities in ISR synchronization and ISR integration. These clarifications were necessary because an ISR field manual did not replace the collection management manual between the introduction of ISR in *Operations* (2001) and the staffing of *Operations* (2008). The White Paper titled *FM 2-01 Information Paper # 2. Clarification of ISR Terminology 18 August 2006*, staffed with The United States Army Infantry Center, The United States Army Armor Center, and CADD, provided the basis for the ISR terms and definitions in *Operations* (2008) during the parallel development of FMI 2-01, *ISR Synchronization*.

Patterns in ISR Evolution

Some patterns in ISR development are rooted in the development of the MI Branch and the intelligence disciplines. Clearer patterns of ISR specific evolution occur later, as divisional MI organizations reach their zenith before modularity and the transition of emphasis from division to BCT.

Since 1976, there has been a demonstrated pattern of equipping MI organizations with a greater and greater technical and personnel capability to collect information. Complimenting the growth in collection capability additional organizational growth

occurred in order to enable MI organizations to better process, produce, and disseminate intelligence products. This pattern does not occur consistently. The requirement and occurrence of growth generally resulted from wartime experience—Felts draws this allusion from World War II to the first Gulf war. Kardos describes how Force XXI “would do more with less” describing the conduct of collection as an “economy of force.” Peacetime experimentation often reflected an ability of increased technology to replace personnel, or reorganization to improve efficiency via the reduction of personnel. The pattern therefore, is to demand much of Intelligence in times of war, increasing its organization; then under resource it in times of peace. This directly affected the organization and doctrine of the Intelligence sections within combined arms brigades entering Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF).

A second pattern is a doctrinal and organizational trend to increase the necessity for divisional MI battalion commanders and their staffs to plan and direct collection operations. Synchronous to this trend was a trend to divest the division intelligence staff of the authority to direct collection, instead transferring direction authority to the operations section, which appropriately tasks subordinate units. Therefore, an increased emphasis for division intelligence staffs in planning, processing, producing, and disseminating intelligence products emerged. This pattern ran parallel to the trend to organize better MI battalions and their subordinate companies.

A third pattern is consistent importance of IPB in facilitating collection. Both doctrinal and professional material consistently demonstrates the direct relationship between identifying intelligence requirements via the IPB process and the impact on collection planning. Organizational analysis and professional discussions also

demonstrate a inconsistent emphasis concerning staff participation in the conduct of IPB and collection planning.

A more recent pattern is towards persistent surveillance. This is the predominant trend dominating joint, and Army conceptual and professional discussion. The need to observe continuously a target of intelligence value until such a time as an action is taken emanates into the TRADOC concepts as well.

BCT Commanders ISR Needs

The BCT commanders of the future modular force need an organization and doctrine that enables the conduct of efficient ISR. In order to plan and direct ISR, including persistent surveillance, BCT commanders require qualified officers, a robust and dedicated ISR staff, a simple and responsive ISR process with an organizational solution and doctrinal clarity that preclude misinterpretation of duties and responsibilities. Furthermore, the responsibility and authority must be consistent with the organizations responsible for developing and training the officers and soldiers charged with carrying out the duties.

Chapter 2 Summary: Obstacles in Evolving BCT ISR

A study of doctrinal and organizational history, a review of literature, and a precursory analysis of trends indicates several potential inconsistencies or contradictions in current and future BCT ISR. Among the inconsistencies is doctrinal clarity and organizational validity. These inconsistencies raise several questions. Foremost, who on the BCT staff that is best suited as the principal staff officer for ISR? What is the

appropriate experience level relative to rank for the intelligence staff officer? Is the staff organization appropriate to facilitate ISR?

The third chapter of this essay will describe the research method applied in collecting, organizing, and presenting the research material used in this study. The fourth chapter analyzes the problems identified in chapters one through three. The final chapter identifies recommendations that will facilitate a transition of current BCT ISR to meet the needs of the future BCT commander. The final chapter also identifies areas requiring further study, to either validate or refute this study.

CHAPTER 3

RESEARCH METHODOLOGY

Throughout the research period of this study, several perceived inconsistencies arose between doctrine and organization. Further evaluation demonstrates that emerging concepts often generated in one unit or experimental atmosphere created an uneven introduction of techniques, procedures, or task organization across the Army. The result, readers previously involved in the organizations discussed in this document may perceive some of the techniques, procedures, doctrine, or organization discussed in this document as appearing out of order or in different relative periods of time. As an example, an article describing a change in doctrine or organization may be months or years behind the conception of the change, yet pre-date doctrinal codification or MTOE change by months or years as well.

Chapter 2 identified a number of literature resources contributing to this study. The literature provides a background of 30 years of intelligence collection and ISR evolution. Analysis of this information helps to affirm whether the current Army doctrine and organization are meeting the needs of the BCT commander. Moreover, examining this background, along with documents illustrating future requirements, allow us to assert what measures to take to ensure the needs of the BCT commander of the future are satisfied. This author's familiarity of the problem occurred in some degree prior to the formal research represented by this study.

To some extent, research for this thesis began with the formation of the United States USAIC&FH Lessons Learned Team later named the USAIC&FH OIL Team. Research continued throughout the doctrinal development and initial drafting of FMI 2-

0.1, *Intelligence, Surveillance, and Reconnaissance Synchronization* from March 2006 to August 2007. With a tangible suspicion that the planning and direction of BCT ISR was occurring in manner that did not, and would not, meet best the needs of the commander, formal and earnest research began in September 2007. By evaluating the evolution of ISR doctrine and organizations, then assessing the current state of ISR and its shortfalls, an evaluation of ISR in future concepts can occur.

The first step in formally researching BCT ISR was determining how it evolved to its current doctrinal and organizational state. In conducting the research, a relationship between doctrine and organization became readily apparent. Although technological innovation in collection assets and communications improvement enabled material development to influence organization and doctrine, it seems that the improvement in allocation of resources was more of an important innovation than the technological improvements themselves—the allocation of people within organizations being the most important resource. Another relationship became apparent in investigating the evolution of ISR. This was the emergence of modern formal collection management facilitated by the intelligence preparation of the battlefield process.

The next step in the research was to assess the sufficiency of doctrine and organization in the current application of BCT ISR. A suspected shortfall in doctrinal adequacy, both in clarity and detail, prompted the initial inquiry leading to this study. The study illuminated further the current organizational shortfall in ISR operations.

An ongoing action of the research was validating the conduct of the study. Initially the information researched for Chapter 1 derived primarily from the MI perspective. Later, the various evolutions of the operations manual and the staff

operations manual contributed significantly to the information. Combined Arms doctrine presented a relatively unbiased doctrinal history compared to other proponent school publications. Chapter 2 addresses additional research utilizing *Infantry*, *Armor*, and *Military Intelligence Professional Bulletin* magazines to introduce a non-doctrinal perspective concerning the evolution, current state, and future of BCT ISR.

USAIC&FH OIL, Concepts, and Doctrine

When USAIC&FH formed OIL Team in the summer of 2003. Trends quickly emerged from collected observations, these trends indicated deficiencies in current ISR throughout the Army echelons. Various symptoms emerged as possible issues, but no single overarching problem was identifiable. This author became the OIL Team Leader January of 2005. Personal continual BCT and ISR observation collection was possible for ten months as the OIL team leader, and an additional eighteen months continuing to lead collection missions to redeploying OEF and OIF units.

Historical Investigation

There are two significant years identified in the development of modern Army ISR. Those dates are 1976 and 1982. Investigating the evolution of ISR led invariably to the formation of the CEWI battalion in 1976. The investigation also leads categorically to the adaptation of AirLand Battle as the United States Army's doctrine in 1982. The CEWI battalion organization and its evolutions provided the means to collect while AirLand Battle clarified the ends for which collection was necessary.

Evaluation of Current Doctrine and Organization

Evaluation of current doctrine and organization highlights a very important innovation in Army plans and development. The Army's organizational focus is now on modular, individually deployable BCTs. Previous ISR doctrine and organizational decisions primarily manifested in changes to the MI battalion at the division echelon. The trend of downward empowerment of resources, from division to BCT, and the elimination of particular force structures, has ramifications on current command and staff relationships.

Current Journal Review

The current Journal Review overlapped with the previous phase of research. The purpose of the current journal review is to identify supporting, mitigating, or refuting discussion concerning intelligence, surveillance, and reconnaissance operations conducted at the tactical echelons brigade and below. Research ended in late March 2008.

Analytical Methodology

This study is academic in nature. Without quantifiable numbers and statistics, it is hardly an exercise in the scientific method. It is more like a scholastic exercise of the Socratic tradition. However, where the Socratic Method would argue assertions or questions to a point of a concrete contradiction, this study does not argue to absolutes. Instead, it illustrates trends demonstrated in the evolution of ISR, organizationally and doctrinally.

To understand truly the subtle evolution of collection and ISR doctrine and organization one would preferably have access to all of the documentation, side by side

and chronologically. The amount of documentation is vast. The analysis of this study highlights those subtleties and assesses the intent and impact of the changes. The application of critical reasoning to each problem is sufficient to argue to a point of inconsistency in ISR trends.

Chapter 4 discusses the relationships in ISR organizational and doctrinal evolution. Through demonstrative evidence provided by the previously summarized literature, Chapter 4 explores the sufficiency of U.S. Army doctrine and organization for ISR. By considering multiple non-doctrinal perspectives as well as relatively unbiased Army doctrine, this analytical method attempts to remain fair, or valid. In this manner, the study analyzes the needs of the BCT commander of the future modular force.

CHAPTER 4

ANALYSIS

From Division to BCT ISR

The Army consistently pursued an organizational improvement of the tactical MI organization starting in 1976 with the inculcation of the CEWI battalion. When threat conditions changed Army organizations changed, as well. The Army modified or created new divisional organizations to meet best the expected threats. The divisional MI organization adjusted in order to best support the division and subordinate brigades as well.

The Army, and subsequently MI, no longer adjust their organization based on identified and predictable threats, but based on capabilities. The 2001 Quadrennial Defense Review (QDR) encapsulated the driving thoughts behind the change. “A central objective of the [QDR 2001] review was to shift the basis of defense planning from a "threat-based" model that has dominated thinking in the past to a "capabilities-based" model for the future” (Shelton 2001, IV). This is not to say the Army does not tailor its deploying forces to best meet a threat.

Capabilities-based planning is consistent with Army thought traceable to *Operations* (1976). Although not stated as capabilities-based planning, General DePuy recognized that sophisticated weapons would appear in any conflict against any nation. “DePuy was impressed that Third World nations like Egypt and Syria, with Soviet assistance, could field and fight large, highly equipped forces with relative proficiency” (Herbert, 1988, 31). The Army must therefore be prepared to meet adversaries possessing modern technologies.

The QDR 2001 had a dramatic impact on the Army organization and doctrine. The QDR 2001 stressed transformation. One key “pillar” of transformation was strengthening joint operations. A tenet of strengthened joint operations is scalable modular organizations. “These joint forces must be scalable and task-organized into modular units to allow the combatant commanders to draw on the appropriate forces to deter or defeat an adversary” (Shelton 2001, 32). In the Army these changes most drastically manifest at the brigade echelon. The change from division to BCT emphasis coincides with the transition from threat-based planning to capabilities-based planning. The Army was already undergoing transformation and happened to be on the cusp of modularity at the brigade echelon with the Interim BCT—a self-contained deployable organization, at least conceptually.

Originally, the Interim BCT developed as a tactical size strategic asset. “A balance between strategic and tactical mobility, lethality, survivability, and sustainability is the goal of this transformation” (LeMoyne 1999, 1). Later the Interim BCT became the Stryker BCT and a starting blueprint for the transformation of Infantry and Armor brigades into the IBCT and the HBCT.

The immediate impact of Army transformation on ISR was the disassembling of the divisional MI battalions. A secondary effect of this decision process was the removal of a MI battalion command and staff in the decision-making of intelligence collection and analytical activities within the division—including collection and analytic support to the division’s subordinate units. The creation of the MI cell within the division mitigated some of the analytical ramifications. “The cell is built around the G-2 staff section and what was previously the Army of Excellence (AOE) MI battalion analysis and control

element” (*The Modular Force*, 5-12). Mitigating the consequences of removing the battalion command and staff influence on collection management did not occur as effectively. From a collection perspective, MI field grade officers no longer exercised the authority to direct ISR assets. ISR planning oversight diminished from a command selected Lieutenant Colonel, his battalion staff, and subordinate commanders to an MI Major and the MICO commander. A related ramification to this decision was the removal of a significant MI influence in the training, development, and mentoring of junior MI officers, specifically MI company commanders.

Until the disintegration of the divisional MI battalions, the authority to direct ISR assets lay with a MI Officer. Before the CEWI battalion, that authority rested with the intelligence staff officer. During the existence of the CEWI battalion, through Division 86, and into the AOE, the CEWI or MI battalion commander directed ISR assets. Now, the BCT commander through the S3—neither of whom are MI officers—exercise the BCT ISR direction. ISR direction then falls to the company grade commander of the BCT MICO. This removal of significant MI field grade influence is inconsistent with 30 years of ISR evolution. This is abundantly clear through an analysis of doctrinal change in association with ISR.

Analysis of Evidence

Changes in ISR Direction Authority

At first, it seems most beneficial to evaluate manuals specifically focused on ISR, or collection management; but those manuals best offer examples of specificity for a given organization. Analyzing FM 6-0 and its series of 101-5 predecessors, manuals contributed to equitably by multiple proponent schools and produced by CADD, presents

the best doctrinal comparison of the Assistant Chief of Staff (ACofS[ACOS]) G/S2 and the G/S3 relationship regarding ISR. Proponent specific publications offer detail to some of the less clear aspects of the staff operations manuals.

This study reviews FM 101-5 1972, 1984, and 1997 along with two drafts, a FAD from 1977 and a FD from 1982. The staff operations manuals generally define intelligence and operations responsibilities for collection [ISR]. The responsibility of the intelligence staff for planning collection [ISR] is consistent through the manuals. The responsibility for directing collection [ISR] varies in emphasis and degree throughout the manuals. From 1972 to 1997, there are changes in the delineation, but not a concise transfer, of collection [ISR] direction authority. There are some significant differences between the 1977 FAD and the 1982 FD, which eventually becomes *Staff Organization and Operations* (1984); but it is not until 2003 that the authority to direct ISR clearly transfers to the operations officer.

In 1972, it is clear that the intelligence officer is responsible for planning and directing collection [ISR]. The intelligence officer was responsible for preparing the plans and orders for both target acquisition and combat surveillance and reconnaissance. The commander was preeminent in this period. Staffs provided the commander “advice and assistance in a particular functional area” (*Staff Officer’s Field Manual Staff Organization and Procedure*, 1972, 1-3).

The ACofS, G2, intelligence, is the principal staff assistant to the commander on all military intelligence matters. He advises and assists other staff officers on all intelligence phases of the functional areas they are responsible for. This assistance may include preparation of plans or orders. In addition to his staff functions, the ACofS, G2, has certain operational functions pertaining to counterintelligence activities and the production of intelligence. The ACofS, G2, has coordinating staff authority for—

Production of Intelligence. Collection of information, conversion of information into intelligence, and dissemination of intelligence. This includes—
....

Preparing plans, orders, and requests for target acquisition, combat surveillance and reconnaissance, and other collection activities. Supervising and coordinating the commander's intelligence collection activities, including air reconnaissance and surveillance; interrogation of enemy PW's, civilian internees/detainees, and refugees; debriefing of returned captured US personnel, escapees, and evaders; exploitation of captured documents and captured material; ground surveillance programs; signal intelligence (SIGINT) programs; employment of long-range reconnaissance patrols; and the development of countermeasures for the commanders operational security (OPSEC)....

Integrating the information collection efforts of other US military elements, the Central Intelligence Agency, the Defense Intelligence Agency, and allied and indigenous elements....

Directing the collection of technical information and the processing of this information into technical intelligence material.

Exercising Staff Supervision over SIGINT resources that are attached or under the operational control of the commander....

Use of intelligence information....

Developing air and artillery targets.

Developing future air and ground reconnaissance targets or areas of interest for surveillance (*Staff Officer's Field Manual Staff Organization and Procedure* 1972, 4-3—4-4).

The ACofS, G3, operations, is the principal staff assistant to the commander in matters pertaining to organization, training, and primary mission operations. He advises and assists other staff officers in the operational aspects of their particular activities. The ACofS, G3, has primary coordinating staff responsibility for—....

Operations which involve—....

Making recommendations on primary mission operations, during both planning and execution, concerning—

Task organization.

Integration of fire and maneuver.

Use of combat support means (less intelligence, counterintelligence, and CMO)....

Planning, which involve—....

Preparing and coordinating operations, including review and integration into the plans of annexes and appendixes prepared by the other staff sections” (*Staff Officer's Field Manual Staff Organization and Procedure* 1972, 4-5—4-6).

In 1972 the operations officer had no authority over any other staff section. “The assignment of staff responsibility carries *no connotation of command authority* over other

staff officers or any other elements of the command” (*Staff Officer’s Field Manual Staff Organization and Procedure* 1972, 1-3). In fact, expressly delimiting intelligence, counterintelligence, and civil-military operations (CMO) from the operations officers’ responsibility shielded the G/S2 from undue operational influence in planning, direction, and intelligence production to justify the conduct of operations. That is, planning an operation occurred considering the threat, not regardless of the threat.

The combined arms thoughts on staff relationships demonstrated in FM 101-5, *Command and Control of Combat Operations* (FAD 1977) indicate little change in the collection [ISR] specific interaction between the intelligence officer and the operations officer. There is however, a greater emphasis on the operations officers’ responsibility to integrate the actions of the functional systems. Although the IOSS was complete, and two CEWI battalions were undergoing testing, there was likely not enough information to change substantially the collection [ISR] discussion concerning the relationship between the G/S2 and the G/S3.

The publication of *Operations* (1982) prompted the 1984 revision of FM 101-5, re-titled as *Staff Organization and Operations*. As with the previous edition of FM 101-5, *Staff Organization and Operations* (1984) empowers the intelligence officer to plan and direct collection while coordinating with the operations officer.

Staff Organization and Operations Final Draft (FD 1982) describes the intelligence officer as “the principal staff officer for the commander on all military intelligence matters.” This language is very similar to the final language of *Staff Organization and Operations* (1984) where the G2 retains primary coordinating staff responsibility for identifying reconnaissance, surveillance, and target acquisition. “...and

recommending unit tasking to support these requirements in coordination with the G3.”

Whom is the intelligence officer recommending unit tasking too? Are the intelligence officer responsibilities relative to the G3 or the commander (*Staff Organization and Operations* FD 1982, 3-8)?

Staff Organization and Operations (FD 1982) describes the operations officer as, “the principal staff officer for the commander in matters concerning operations, organization, and training.” In regards to collection, the operations officer is responsible for, “Preparing, coordinating, authenticating, and publishing operations plans and orders, including tactical movement orders; and reviewing plans and orders of subordinate units.” The Operations Officer is also responsible for, “Coordinating all aspects of maneuver with support (e.g., fires, EW, services) to include other service components...” There is nothing in *Staff Organization and Operations* (FD 1982) subordinating any principal staff officer to the operations officer. On the contrary, the manual is very careful to include the words “supervise” and “supervising” in order to clarify when the operations officer is the principal for a particular function in coordination with other staffs (*Staff Organization and Operations* 1982, 3-13—3-14). Just as *Staff Organization and Operations* (1984) complied with *Operations* (1982), Army intelligence doctrine was refined for consistency with *Operations* (1982).

The G2 is the principal staff assistant to the commander on all military intelligence matters. He advises and assists other staff officers on all intelligence phases of the functional areas for which they are responsible. This assistance may include preparation of plans or orders. In addition to his staff functions, the G2, has certain operational functions pertaining to counterintelligence activities and the production of intelligence. He has coordinating staff authority for:

Production of Intelligence. Collection of information, conversion of information into intelligence, and dissemination of intelligence....

Preparing plans, orders, and requests for target acquisition, combat surveillance and reconnaissance, and other intelligence-collection activities....

Conducting intelligence preparation of the battlefield (IPB) prior to combat in order for the commander to “see” the battlefield. This includes gaining a detailed knowledge of the enemy, terrain, and weather (*Command and Control of Combat Operations* FAD 1977, A17—A18).

The G3 is the principal staff assistant to the commander on matters pertaining to organization, training, and primary mission operations. He also advises the staff officers in the operational aspects of their particular activities. The G3 has primary coordinating staff responsibility for....

Making recommendations on primary mission operations, during both planning and execution, concerning:....

Integration of Functional Systems (*Command and Control of Combat Operations* FAD 1977, A22-A23).

By 1982 however, there are obvious changes in Army thought concerning the relationship of the intelligence and operations officer concerning collection [ISR].

Simply instructed to conduct coordination with one another, confusion regarding collection [ISR] arises between the G2 and G3, with no clear delineation of which officer is the principal for collection [ISR]. The planning of collection [ISR] remains clearly the responsibility of the G2. However, it is also clear that the G2 now recommends taskings in coordination with the G3.

The ACofS, G2, Intelligence, is the principal staff officer for the commander on all military intelligence matters. In coordination with other command and staff elements and through the efficient use of plans, orders, and SOPs directs all elements in the intelligence and counterintelligence support roles. The ACofS, G2, has primary coordinating staff authority for— collection and processing of information,

Identifying requirements for reconnaissance, surveillance, and target acquisition (RSTA), and recommending unit tasking to support these requirements in coordination with the ACofS, G3....

Supervising and coordinating the command’s intelligence collection and target acquisition activities, including aerial and ground reconnaissance and surveillance; imagery intelligence (IMINT) program; human intelligence (HUMINT) program; including interrogation....

Recommending targets to the Fire Support Coordinator” (*Staff Organization and Operations* FD 1982, 3-8—3-10).

The ACoS, G3, is the principal staff officer for the commander in matters concerning operations, organization, and training. The nature of the operation's officers responsibilities requires a high degree of coordination with members of the staff. The ACoS, G3, has primary coordinating authority for—
....

Preparing, coordinating, authenticating, and publishing operation plans, including tactical movement orders, and reviewing plans and orders of subordinate units....

Task organizing and assigning tasks to subordinate elements of the command....

Coordinating of all aspects of maneuver with support (e.g., fires, EW, services), to include other service components.... (*Staff Organization and Operations* FD 1982, 3-13—3-14).

The relationships described in *Staff Organization and Operations* (FD 1982) manifest in the published *Staff Organization and Operations* (1984). One exception however, is retaining key 1972 language concerning the operations officer. The operations officer would still be restricted to recommending, but not performing, task organization. Additionally, the IPB discussions introduced in the FAD 1977 remain in FD 1982 and the published 1984 manual.

Twelve years transpired between the publication of *Staff Officer's Field Manual* *Staff Organization and Procedure* (1972) and *Staff Organization and Operations* (1984). It is important to understand the organizational modifications influencing the change in doctrine in this twelve-year period.

The first CEWI battalion formed in 1976. As such, there was a MI Lieutenant Colonel commanding subordinate to the division commander. Prior to the formation of the CEWI battalion, the intelligence "tasking" or direction method was MI point-to-point. That is, the G2 officer tasked the supporting provisional MI company. The method made sense since the G2 was the staff expert for MI.

With the formation of the CEWI battalion as an authorized permanent unit, there was a valid argument to change the collection tasking method from the G2 to the G3. Two circumstances made this change logical. First, the G3 routinely assigns tasks, or missions, to subordinate units. Second, EW, less SIGINT programs, was the staff supervisory responsibility of the G3. Rather than having two “tasking” channels to the CEWI battalion, one for collection and one for everything else, all tasking to the CEWI commander passed through the G3. However, this did not necessarily mean collection [ISR] direction authority passed to the G3. Nor does this indicate the change occurred overnight or resulted in an efficient manner for tasking collection.

Between 1972 and 1979, the relationship between the division G2, G3, and CEWI battalion began to balance. In respect to the interaction between the division staff and the CEWI battalion commander, “The CEWI battalion commander works directly for the division commander as befits any battalion commander. He works with but not for the G2. The CEWI commander also works with the G3 to fulfill offensive electronic warfare responsibilities and with the Division Communications and Electronics Officer to full fill defensive electronic warfare.” Adding also, “The G2 and G3 task the CEWI battalion in the same manner as they task other divisional units for the commander” (Gordon 1979, 26-27). Curiously, the dual-chain for tasking continued well beyond 1979. This steadfast relationship seems directly associated with the organization of the G2, the CEWI battalion, and technological and communications advances contributing to MI organizations.

The G2 CM&D section leads the division collection effort. The CEWI Battalion Technical Control and Analysis Element (TCAE), supervised by the CEWI battalion S3

“receives taskings from the CM&D section.” The interaction demonstrates the division G2 tasked the CEWI battalion to conduct collection [ISR]. Tasks passed directly from the G2 to the CEWI battalion S3. Automation advancements promised to increase the efficiency of this activity (Burton 1981, 10-11).

The CEWI battalion commander and staff executed the G2 plan with the battalion’s organic collection [ISR] assets, as well as OPCON aviation assets (*Division Intelligence and Electronic Warfare Operations* 1986). The planning and direction of collection [ISR] remained firmly within a trained and experienced MI chain.

Collection [ISR] direction responsibility was no clearer in *Staff Organization and Operations* (1997). The G2 was responsible for “Planning and managing intelligence collection operations in coordination with the G3 and Fire Support Planners.” The G3 was responsible for “coordinating with the G2 to write the reconnaissance and surveillance annex, which includes tasking units with available assets.” Both principal staff officers were responsible for coordinating with the other. Taken at face value the G2 was responsible for ISR tasking via planning and coordination. The G3 appeared responsible for ensuring the writing of Annex L, Reconnaissance and Surveillance, was simply in accordance with the G2’s plan.

The G2 (S2) is the principal staff officer for all matters concerning military intelligence (MI), counterintelligence, security operations, and military intelligence training. An intelligence officer is located at every echelon from battalion through corps. The common staff duties and responsibilities were listed in the previous section. Following are the areas and activities that are the specific responsibility of the G2 (S2)....

Coordinating with the entire staff and recommending PIR for commander’s critical information requirements....

Coordinating ground and aerial reconnaissance and surveillance operations with other collection assets....

Assisting the G3 in planning target acquisition activities for collection of target information....

Planning and managing intelligence collection operations in coordination with the G3 and fire support planners (*Staff Organization and Operations* 1997, 4-10—4-11).

The G3 (S3) is the principal staff officer for all matters concerning training, operations and plans, and force development and modernization. An operations officer is located at every echelon from battalion through corps. The common staff duties and responsibilities were listed in the previous section. The areas and activities that are the specific responsibility of the G3 (S3) follow....

Preparing, coordinating, authenticating, publishing, and distributing the command SOP, OPLANs, and OPORDs, fragmentary orders (FRAGOs), and warning orders (WARNORDs) to which other staff sections contribute....

Synchronizing tactical operations with all staff sections....

Coordinating with the G2 to write the reconnaissance and surveillance annex, which includes tasking units with available assets, to collect the commander's priority intelligence requirements.

Recommending IR to the G2.

Integrating fire support into all operations (*Staff Organization and Operations* 1997, 4-12).

Missing from both the G2 (S2) and G3 (S3) sections of paragraphs of *Staff Organization and Operations* (1997) is an indication of which officer is the principal for the task of integration of reconnaissance and surveillance into all operations. The sentence, "Planning and managing intelligence collection [ISR] operations in coordination with the G3..." indicates the G2 performs this task and coordinates with the G3. This reflects direction authority still vested in the G2. Contrarily, the "Coordinating with the G2 to write the reconnaissance and surveillance annex, which includes tasking units with available assets..." bullet indicates the G3 is the responsible staff principal for direction of collection [ISR].

Operations (2001) introduced ISR firmly into Combined Arms doctrine. This discussion does not assign the task of ISR integration to a particular staff officer. Moreover, there was little need to. Between 1997 and 2001 trends indicated the

continuance of the intelligence officer as the principal staff officer for collection [ISR]. One indicator was the results of the 4th Infantry DAWE in November 1997. The second was the advent of the Interim BCT. The former introduced the concept of intelligence orchestration, the second ISR integration.

"Orchestration" is an appropriate name for the way we managed intelligence operations during the DAWE. The concept of orchestration goes beyond the existing intelligence principle of synchronization (FM 34-1) and is in line with the final draft of the new FM 100-5, Operations. Intelligence orchestration aptly describes the art and science of focusing scarce collection and analytical resources at the right times and places to maximize intelligence support to commanders" (Wallace and Tait 1998, 7).

Orchestration implies that ISR is not just a plan, but a current operation. "While synchronization implies developing a coordinated plan that is reflected on a matrix and executed by the numbers, orchestration recognizes that dynamic and innovative adjustments to the plan will allow commanders to anticipate and seize opportunities" (Wallace and Tait 1998, 7). This recognition of the real-time relevance of collection, and adjusting the collection plan as a result of current operations decisions reintroduced open discussion of the intelligence staffs role in direction of collection [ISR] under the auspice of orchestration.

Orchestration becomes ISR integration because of the EXFOR Warfighters, the T-RAP, and the development of the Interim BCT.

The RSTA squadron is the brigade's primary source of combat information and targeting data. The squadron also provides the brigade with many R&S soldiers on the ground to help the brigade understand the operational environment in detail. This differs from the traditional scout focus primarily on threat forces. The brigade S2 integrates the ISR effort through the S3 (to include providing tasks to the RSTA squadron) and is supported by the ARFOR analysis and control element (ACE) or intelligence element in order to provide situational awareness and understanding in the AO (Goodman 2000, 49-51).

In a 2000 article David L. Gosinski wrote, “ISR integration is a crucial component; it is the most revolutionary step in MI support to the Interim Division.” Gosinski goes on to articulate the description of the ISR integrator, an intelligence position that would plan and direct ISR. “The ISR integrator can request or task to fill gaps and permit sensor synchronization. Intelligence, surveillance, and reconnaissance integration does not just include intelligence sensors; it includes any battlefield surveillance or reconnaissance sensor, for example AN/TPQ-36 counterbattery radar or the scouts” (Gosinski 2000, 10).

The progression of orchestration to ISR integration captured doctrinally in FM 3-21.3, *The Stryker Brigade Combat Team*, 2003, demonstrates a progression to imbuing the SBCT S2 with planning and direction authority. Although *The Stryker Brigade Combat Team* 2003 states “The MI company conducts intelligence analysis and ISR integration as well as HUMINT collection.” The conduct of intelligence analysis and ISR integration occurs through MICO platoons named for the two functions, both OPCON to the SBCT S2 (*The Stryker Brigade Combat Team* 2003, 10-18).

Given the consistent systematic progression of collection, orchestration, and ISR integration, it seemed evident the S2 was the logical choice to plan and direct ISR in the BCT. Nevertheless, *Mission Command: Command and Control of Army Forces* (2003) carefully articulates the responsibility of the G/S2 and the G/S3 in conducting ISR integration. The G/S2 conducts intelligence synchronization and facilitates ISR integration. The G/S3 conducts ISR integration

The ACOS, G-2 (S-2) is the principal staff officer for all matters concerning the enemy/threat, the environment as it affects the enemy/threat,

intelligence, and counterintelligence. Additionally, the G-2 (S-2) supports security programs. A G-2 (S-2) is authorized at every echelon from battalion through corps. The G-2 (S-2) is responsible for intelligence readiness, intelligence tasks, intelligence synchronization, other intelligence support, counterintelligence, and support to security programs....

- Providing intelligence support to targeting, to include participating in targeting meetings, developing targets, planning target acquisition, and tracking high-payoff targets (HPTs)....

- Recommending priority intelligence requirements (PIRs).

- Intelligence Synchronization. Intelligence synchronization includes—
Synchronizing intelligence support to operations and to ISR integration through close coordination with the commander, COS (XO), G-3 (S-3), and the other staff members.

- Managing intelligence requirements, to include—

- Developing and continuously updating a list of intelligence gaps....

- Developing the intelligence synchronization plan.

- Satisfying requirements through intelligence reach.

- Tracking requirements and disseminating intelligence to satisfy CCIR, then PIRs, FFIR, IRs, and other requirements.

- Evaluating collection reporting and intelligence.

- Facilitating ISR integration by giving the commander and G-3 (S-3) the initial intelligence synchronization plan and helping the G-3 (S-3) develop the initial ISR plan....

- Recommending to the commander and G-3 (S-3) adjustments to the ISR plan to facilitate ISR integration. This task includes—

- Recommending to the G-3 (S-3) refocus of and new taskings for assigned, attached, and supporting intelligence collection assets (*Mission Command: Command and Control of Army Forces* 2003, D12-D14).

The ACOS, G-3 (S-3) is the principal staff officer for all matters concerning training, operations and plans, and force development and modernization. A G-3 (S-3) is authorized at every echelon from battalion through corps....

- Preparing, coordinating, authenticating, publishing, and distributing the command SOP, plans, orders (including fragmentary orders [FRAGOs] and warning orders [WARNOs]), and terrain requirements and products involving contributions from other staff sections....

- Synchronizing tactical operations with all staff sections.

- Reviewing plans and orders for synchronization and completeness....

- Integrating ISR into the concept of operations.

- Integrating and managing the ISR effort through an integrated staff process and procedure.

- Developing the ISR plan (with rest of the staff). The ISR plan produces an initial ISR order to answer initial CCIR, PIRs, and IRs. It supports the commander's visualization.

- Developing the ISR annex to plans and orders (with the rest of the staff).

Synchronizing ISR with the overall operation throughout the operations process (with the rest of the staff).

Allocating ISR tasks (considering recommendations from the rest of the staff).

Retasking and refocusing collection assets during execution (considering recommendations from the rest of the staff).

Integrating fire support into operations (*Mission Command: Command and Control of Army Forces* 2003, D15- D-16).

This study produced no definitive evidence describing the decision to assign the task of ISR integration to the operations officer. Anecdotal evidence suggests two possible reasons, both stemming ostensibly from the same root observation. Perhaps the BCT MI staff officer had not been performing the tasks associated with ISR integration well; namely, integrating the surveillance and reconnaissance requirements into the overall operation. Dr. Jackie Kem suggests one possible reason for this inadequate performance was the failure of MI as a branch to field sufficient numbers of MI Majors to the brigades resulting in filling the positions with MI Captains of varied experience (Kem 2008). The second reason, possibly related to the idea of the operations officers role in synchronizing all aspects of the overall operation, may have resulted in the decision to identify the S3 as the ISR integrator.

Experience, Rank, and Staff Requirements

Major Daniel Soeller remarked in 2007, “Division G2s should be O-6s and brigade [S]2s should be Lieutenant Colonels. If operations are based on intelligence then the [S]2s need to be on par with the operations guys... Captains do okay at battalion level. At brigade, a BCT is more like a Division.” A recently redeployed MI Brigade S3, Major Soeller, surmised both his and his commander’s concerns as he and Colonel Mark

Quantock forecast the consequences of disbanding the command and control relationship of the division MI battalion (Soeller, 2007).

It would seem logical that an increase of assets and personnel within the BCT would be accompanied by an increase in the leadership associated with managing those assets and personnel. In fact, to a degree, the BCT S2 section did increase. However, the experience of the leadership and staff organization is questionable in regards to ISR. In regards to adding organic as well as force-tailored assets to the BCT “[They] piled so much stuff on the plate and they [BCT S2s] are struggling mightily!” “Most of the time BCTs were receptive to pushing assets down [to battalions]. [Battalions] wanted direct support not general support. He [the Brigade Commander] is operating like a division commander” (Soeller, 2007).

A BCT is now directing almost a AOE division’s amount of organic intelligence specific ISR assets. The S2, not the S3, is responsible for maintaining visibility of the adjacent unit and higher command ISR assets in supporting a nested ISR plan in full spectrum operations.

The BCT S2 is the senior intelligence officer in the development of the MICO commander in garrison as well as his wartime advisor. “The beauty of the divisional battalion was an O-5 commander could get out to the MICOs. Now the BCT S2 has to mentor the MICO commander and the [battalion] S2s” (Soeller, 2007). The BCT S2 is responsible for planning collection, supervising the processing of collected information, being the senior intelligence analyst in the BCT, the intelligence advisor to the BCT commander, as well as the mentor and advisor to the MICO commander.

Confusing Terms and Responsibilities

Operations (2008) explains “Commanders use integrating processes and continuing activities to synchronize operations during all operations process activities.” *Operations* (2008) goes on to state, “Certain integrating processes occur during all operations process activities. They must be synchronized with each other as well as integrated into the overall operation:” (*Operations* 2008, 5-20). Important to this discussion are the integrating processes IPB, targeting, and ISR synchronization. *Operations* 2008 also describes ISR Operations as a continuing activity that, “...are synchronized with one other [the other continuing activities] and integrated into the overall operation:” (*Operations* 2008, 5-21).

Of the integrating processes, IPB and intelligence [ISR] synchronization—with their focus on the enemy, terrain, weather, and civil considerations—are most directly related to assessing three of the six factors of METT-TC. The intelligence cell oversees these functions (*The Operations Process* 2006, 3-7).

The intelligence cell coordinates activities and systems that facilitate understanding the enemy, terrain, weather, and civil considerations. This includes tasks associated with intelligence preparation of the battlefield and ISR. The unit’s G-2/S-2 leads this cell (*The Operations Process* 2006, 2-10).

The integrating processes—especially targeting and IPB—produce information requirements related to the environment and threat. Making the most effective use of available information and collection assets requires managing these requirements. In most cases, the number of requirements exceeds the unit’s processing and collection capability. The collection manager tracks and manages all intelligence requirements until they are answered or become irrelevant. The intelligence synchronization process ensures that the appropriate staff section or collection asset is tasked to collect the required information. It also ensures the optimal collector is tasked and the highest priorities satisfied first. Moreover, to preclude wasting limited resources, tasking multiple collection assets against a requirement or target should be a conscious decision (*The Operations Process* 2006, 3-10).

The *intelligence warfighting function* is the related tasks and systems that facilitate understanding of the operational environment, enemy, terrain, and civil considerations. It includes tasks associated with intelligence, surveillance, and

reconnaissance (ISR) operations, and is driven by the commander. (See chapter 7.) Intelligence is more than just collection. It is a continuous process that involves analyzing information from all sources and conducting operations to develop the situation... (*Operations* 2008, 4-4).

This is not to say that the functional cells do not integrate. The sustainment cell integrates numerous logistic areas and services. The fire support cell integrates Army indirect fires and joint fires. It also integrates the contributions of all WFFs to targeting through the targeting working group. (Working groups are discussed in paragraphs 2-38–2-42, below.) This integration, however, generally focuses on maximizing the effects of a single WFF. Integrating cells focus the efforts of functional cells on planning, preparing for, or executing the overall operation within a time horizon (*The Operations Process* 2006, 2-6).

Both IPB and ISR are integrating processes of the Intelligence WFF. The Intelligence WFF performs these integrating processes in conjunction with the operations process.

Analysis of Organizational Change and the Operating Environment

In his Monograph Thomas Felts describes a “Tendency for commanders to want more” tracing a trend to WWII. Felts asks if the “current tactical intelligence organization at division level provide effective intelligence support.” Writing in 1998 Felts used the divisional MI battalion model as a focal point of his study. The DS MICO of the divisional MI battalion is the predecessor of the current BCT MICO. More to the point, the trends Felts cites are relevant to this essay, specifically because his stated problems and accompanying analysis are still issues today. Felts questioned the current organizations adequacy in its ability to maximize information. He speculated that MI information exploitation was never maximized. One reason was lack of investment in MI. A second reason is an over reliance on technology. Stated earlier, commanders require more from MI in wartime, but MI suffered the cost of budget cuts in peace. Felts

demonstrated the “Tendency to Diminish MI During Peacetime.” Eventually asking, “So, why has the Army historically maintained status quo, or cut MI force structure? Some of this can be attributed to the myth of being able to do more with less, given enabling information technology. This myth has become reality in the current A- Series and Force XXI (F-Series) TOE'S ... which show static or reduced intelligence structure compared to the Division 86 MI battalion” (Felts 1997, 17).

Unfortunately, this pattern of general growth often materialized on paper more than in reality. It is consistent with historical patterns to draw down the military in times of peace. Furthermore, it is consistent with history to restrict intelligence resourcing to a greater degree than the general Army force. This is a direct contradiction to achieving and sustaining MI readiness. It would be detrimental to intelligence readiness, ISR in particular, to continue this trend in the next peace period.

Summary

Since 1991, the Army’s driving doctrine is no longer AirLand Battle, nor is it necessarily Force Projection although the doctrinal discussion of projection capability remains. The Army’s driving doctrine is Full Spectrum Operations and the BCT is the premier echelon the Army projects in the conduct of offense, defense, and stability operations. The BCT needs an organic ISR staff able to satisfy the BCT commander’s information requirements. The BCT commander requires a robust and qualified staff capable of continuous ISR planning, direction and execution—the conduct of dynamic retasking in pursuit of persistent ISR will be a norm of execution. Chapter 5 discusses

recommendations to improve BCT ISR in order to most effectively support the BCT commander in the future.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study asks whether the Army concepts ISR meet the needs of the BCT commander of the future. On paper the answer appears at first glance to be affirmative; but that glance overly relies on key personnel without doctrinal or institutional competency in the direction of ISR. Promised technology and organic assignment of personnel and resources from the division to the BCT dramatically increase the potential for effective ISR in the BCT; However, the Army has failed to provide the qualified leadership to direct synchronized and integrated ISR in support of the BCT commander. The present BCT commander does not have the personnel needed to conduct efficient ISR while awaiting the promised technologies. The present BCT commander has doctrine that is at best inconsistent, and at worst contradictory to the efficient planning and direction of ISR. The BCT commanders require qualified officers and staff, and a simple and responsive ISR process. The Army owes BCT commanders an organizational solution and doctrinal clarity. These two fundamentals will facilitate training, which in turn, prepares officers and staff through education and training.

The BCT-MICO is an important asset in increasing the ISR potential of the BCT staff. The MICO provides a significant number of collectors, but more importantly the MICO augments the BCT S2 with a platoon, or platoons, of personnel that not only perform analysis and processing, but also facilitate ISR integration. What the BCT lacks is authority vested in truly qualified officers are, preferably, both educated and experienced in the direction of ISR. A qualified officer, imbued with both the

responsibility and the authority to direct ISR, is most beneficial to the commander and the BCT.

A simple and responsive ISR process must be flexible. It must facilitate dynamic re-tasking to achieve persistent ISR. It must be resilient in reconciling gaps uncovered by dynamic re-tasking with efficient modifications to the near-term and long-term plan. The reconciliation of uncovered gaps can only occur in coordination with lower, adjacent, and higher units. The S2 is responsible for asset visibility—knowing the capability and availability of subordinate organic ISR assets, adjacent unit capabilities, and higher capabilities. When a gap is uncovered, the S2 coordinates for coverage by capable adjacent and higher ISR assets. When this is not feasible, the intelligence officer should direct an organic or attached asset to cover the gap.

This study makes several recommendations that will increase the effectiveness of BCT ISR. This study also raises several related questions prompting further investigation.

Recommendations

Doctrinal and organizational convergence in the planning and directing of ISR may finally be achieved by: increase the rank, and accordingly the experience, of the BCT S-2 to the rank of Lieutenant Colonel; add dedicated ISR officers and multi-branch staff; provide appropriate multi-branch support to IPB and ISR synchronization through permanent representation in the Intelligence Functional Cell; and improve the definition of ISR synchronization. This correction of doctrinal and organizational disparity begins by identifying the BCT S2 as the principal staff officer for all aspects of intelligence including ISR.

Recommendation 1, Identify the Intelligence Officer as the Principal Staff Officer for Intelligence Including ISR in the BCT.

The BCT S2 is the principal staff officer for all aspects of intelligence. From Joint through Army Staff and on to tactical Army echelons, ISR is designated an Intelligence Function or WFF. This study has demonstrated a proof by doctrinal precedence that the intelligence staff officer was the principal staff officer for ISR [collection] in 1972. The intelligence officer retained this responsibility, albeit with variances in specific related requirements, through 1997. This responsibility, doctrinally sustained until the publication of *Mission Command: Command and Control of Army Forces* (2003), strongly suggest the intelligence officer both planned and directed ISR. This study has demonstrated why and how the authority to direct ISR slowly and seemingly logically delineated between the intelligence officer and the operations officer. Furthermore, this study demonstrates why that delineation is no longer logical. Conversely, the consolidation of planning and direction authority in the intelligence officer is ever more logical, especially in light of the BCT commander's needs in the future.

The BCT S3 is responsible for integrating the BCT forces so they operate as a whole, but the S3 is not the integrator of all the key tasks of each warfighting function. The S2, through specific Intelligence WFF personnel, should integrate the conduct of ISR as part of planning, and then direct current operations ISR as well as modify future operations ISR based on current operational decisions. Information collected by ISR assets may be of immediate use to the other Warfighting functions as combat, or tactical, information. However, the primary purpose of directing ISR assets is to collect information to support intelligence development to support the commander's decision-making.

Recommendation 2, Increase the Rank of the BCT Principal Intelligence Staff Officer to Lieutenant Colonel.

This study described the evolution of the Army's intelligence battalions at the division echelon—and how it influenced its subordinate elements. Furthermore, this study described how the command and staff of that organization provided influence and experience to its subordinate units and by proxy the brigade intelligence staff. The current BCT intelligence staffs lack the experience provided through the divisional MI battalion command influence. The BCT intelligence officer is therefore the MICO commander's technical and tactical employment advisor. Experience is therefore a requisite for the BCT S-2. Identifying the BCT S2 as a Lieutenant Colonel billet will ensure assignment of experienced officers to the position.

Recommendation 3, Increase the BCT Staff to Facilitate Focused and Twenty-four-hour ISR.

Regardless of the application of the preceding two recommendations, the current TOE for the BCT staff is lacking between one and three key officers. ISR is a combined operation that occurs inseparably in the context of current operations and future operations and plans. *The Operations Process* (2006) is all too correct in its stating that brigade resourcing is not robust enough to field future operations cells. ISR, because of retasking and dynamic retasking, has an inherent future operations requirement. The Army must resource the brigade with the personnel to conduct continuing current ISR operations, future operations adjustments, and ISR plan refinement.

The Requirements Manager is an additional intelligence billet required on the intelligence staff for duty in the intelligence cell. This officer would monitor the

disposition of ISR in current operations and appropriately modify ISR synchronization in the near-term, future operation resulting from current operations ISR FRAGOs.

A second officer, the ISR integrator, is an additional billet—either either a maneuver or intelligence Major depending on the determination of Recommendation 1. This officer would be the current operations dedicated ISR officer. This position would be a permanent position on the intelligence staff as the intelligence functional cell current operations representation for ISR.

The Intelligence Functional Cell requires multi-branch representation in order to most effectively conduct IPB and support to targeting as it applies separate from as well as in support of ISR synchronization. Both IPB and targeting result in the identification of information requirements and intelligence requirements. Both IPB and ISR synchronization are integrating processes, vital contributors to the operations process. Doctrine has consistently illustrated the requirement for multi-branch participation in ISR and IPB. Organization must provide, and doctrinal discussion must include a permanent multi-branch presence within the intelligence warfighting functional cell.

Recommendation 4. Clarify Terms.

Doctrine clearly states that ISR synchronization is an integrating process. Then what is ISR integration? In its current context, it is a redundant term. ISR integration in its original context was the process of orchestrating, or incorporating ISR with the mission, or operation. ISR integration in its current context is an unnecessary term requiring the operations officer to perform a duty that is already identified as his responsibility; namely, “synchronizing tactical operations with all staff sections” (*Mission Command: Command and Control of Army Forces* 2003, D-15). ISR integration

may be misconstrued simply as “tasking” authority, and because of its redundancy with the task of ISR synchronization, this unintended interpretation is effectively valid. Furthermore, planning and direction are clearer terms describing the tasks currently described as ISR integration.

ISR synchronization is an integrating process. Perform ISR is an Intelligence Warfighting Function task. The Intelligence Warfighting Function integrates intelligence into the plans of the other warfighting functions and the current operations of the other warfighting functions, as such the Intelligence Warfighting Function integrates intelligence into plans and current operations as a whole. Therefore, the S-2 is the ISR integrator. However, there is a clearer method of describing this process.

During the Operations Process ISR synchronization occurs. Within ISR synchronization planning and direction occurs. The current joint definition of planning and direction is feasible. Within the definition, “the issuance of orders” is the most contentious phrase in delineating responsibility between the S2 and the S3. The Army must accept that both the S2 and the S3 issue ISR orders on behalf of the commander as part of the Operations Process. To facilitate persistent ISR and compensate for consequences of dynamic retasking both the S2 and the S3 must have the authority to issue ISR orders. These orders immediately adjust ISR in the current operation as well as direct planned ISR to compensate for current operations adjustments.

Recommendation 5, Train and Develop Maneuver Officers.

The Army must train and develop Infantry and Armor and Aviation officers to conduct ISR integration [ISR Direction]. The necessity to identify dedicated ISR officers within the Intelligence Functional Cell is more valid with the rejection of

recommendation number one and two. Although this study purposely delimited training from its scope, the Army will have to conduct deliberate training in those aspects of ISR integration traditionally taught to intelligence Lieutenants and Captains.

Counter Arguments

Arguing that the S3 is the overall integrator of operations is not a valid argument, especially in light of current doctrine, specifically *The Operations Process* 2006 and *Operations* 2008. Synchronization of the operation may indeed be the function of the operations officer, but it is clearly the responsibility of the principal staff officer of each warfighting function to coordinate, synchronize, and integrate those functions and tasks within their respective functional area. The operations officer is therefore responsible for integrating the warfighting functions in current and future operations. The G5 is similarly responsible for integrating the warfighting functions in terms of planning operations.

Opponents to these recommendations may argue that imbuing ISR direction authority in the BCT S2 will further exacerbate issues identified by Major Soeller, namely the proliferation of ISR assets which were previously MI battalion assets and now organic to the BCT. However, Major Soeller's comments must be taken in context. The BCT commander requires not only the collectors, but also the leadership to task, process, exploit, and disseminate the resultant intelligence. The BCT S2, with augmentation from the MICO has the staff personnel to manage those tasks. This study recommends additions to increase the effectiveness in performing those tasks through dedication of an ISR officer and mitigating the experience loss resultant from the MI battalion command and staff disintegration.

Further Research

This study raises many questions purposely delimited from its scope. Doctrine, organization, and training are nearly inseparable. In discussing the organizational and doctrinal aspects of BCT ISR, training questions naturally emerged. This study provides a stepping-off point to address training issues relevant to ISR. The most profound point relates directly to the fourth recommendation of the previous section and training. Additional questions and points of further research include the role of Red teaming in ISR, and appropriateness of the operations officer staff position in the Warfighting Function framework.

Training

If ISR synchronization and ISR integration remain two separate tasks with lead divided between the intelligence and operations principal staff officer, then what training do the traditional operations branches need to incorporate to ensure traditional combined arms operations officers can sustain and maintain ISR integration proficiency? One means of confirming or refuting recommendations of this analysis is the conduct of a survey of Infantry, Armor, Aviation, and Military Intelligence officers. The purpose of the study should be to identify operations officers who have performed the duties of the ISR integrator or the task of ISR integration and ISR synchronization within the current *Operations* 2008 definition of each.

Red Team

What role does the Red Team play in ISR? This study has demonstrated the inherent reliance multi-staff participation in the conduct of IPB as well as developing an

ISR synchronization plan. Red teaming is a natural contributor to determining threat courses of action facilitating both IPB and ISR synchronization. “When supporting the intelligence staff, red teaming can provide alternative courses of action from the enemy’s cultural perspective, which will result in an improved analytical product. Red teaming will also insure the enemy is appropriately portrayed in the wargame” (TRADOC PAM 525-3-3, 2007, 24) Further, Red teaming in cooperation with the intelligence staff could facilitate intelligence support to targeting. A permanent, trained multi-staff representation assigned to the Intelligence Warfighting cell would facilitate ISR synchronization as well as IPB, targeting, and Red teaming.

The Operations Officer

Is the operations officer still a viable staff title? Perhaps below division the S3, Movement and Maneuver Officer, is more appropriate. “Army doctrine now equally weights tasks dealing with the population—stability or civil support—with those related to offensive and defensive operations” (FM 3-0, vii). Although Operations 2008 recognizes that stability operations are an important focus of Army operations, offensive and defensive operations will occur prior to concurrent with or perhaps even after a stability operation. Victory in maneuver warfare remains a critical requirement for Army forces. Therefore, a maneuver officer will likely remain the commander, deputy commander, executive officer, and operations officer, of the BCT in the near future. But is it appropriate for the operations officer to be a maneuver officer in a stability operation which does not require an emphasis on maneuver, or even security? Identification of the operations officer as a maneuver officer, and affording said officer a higher rank than his peers was justifiable in an age dominated by offensive and defensive maneuver

operations. This was a continuing corollary of a maneuver focused doctrine be it an active defense or an AirLand battle. Because capstone doctrine drives cascading change in other doctrine it was inevitable that operations centric focus became preeminent. Perhaps it would be more appropriate to consider the S3 the movement and maneuver officer and allow the commander an ability to designate an operations officer from his principal staff officers. The decision may be base on rank and experience; a more important consideration should be the type of operation. Stability operations likely require a lessened focus on the maneuver-centric focus manifest in the operations officer. The tactical problem and subsequently the operational focus may necessarily be on CMO. It would then follow that the most appropriate operations officer be a Civil-Military Officer. In this manner the operations officer loses its permanent preeminence, it is a temporary position assigned to the principal staff officer with the most training and experience in the particular operation. The Chief of Staff remains the preeminent staff officer for synchronizing the operation and integrating all Warfighting functions. As all staff principals or all Warfighting Function “Chiefs” contribute to the operation, then they are all operations officers – each specializing in their own field.

Above All – Commander’s Drive ISR, People Conduct ISR

Regardless of the doctrinal, organizational, and institutional training implications of this study, one important conclusion remains the same. BCT commanders have the inherent authority to task organize in a manner that will most effectively facilitate the conduct of ISR within their organization. There is no need to wait a change in an MTOE or doctrine. Implementation of the proposals in this document as unit specific techniques

or standing operating procedure may immediately improve the performance of ISR in the BCT.

The performance of ISR ultimately rests on a trained, educated, and preferably experienced organization of people. When technological enablers are not present or do not deliver the improvements promised, properly organized people using well-founded doctrinal principles accomplish the mission.

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